



# TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

## MEETING MATERIALS

December 13, 2012

CALTRANS

BAY AREA TOLL AUTHORITY

CALIFORNIA TRANSPORTATION COMMISSION





## *Letter of Transmittal*

**TO:** Toll Bridge Program Oversight Committee  
(TBPOC)

**DATE:** December 5, 2012

**FR:** Program Management Team (PMT)

**RE:** TBPOC Meeting Materials Packet – December 13, 2012

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Herewith is the TBPOC Meeting Materials Packet for the December 13<sup>th</sup> meeting. The packet includes memoranda and reports that will be presented at the meeting. A Table of Contents is provided following the Agenda to help locate specific topics.



**TBPOC MEETING**  
**December 13, 2012, 11:30am – 2:00pm**  
**325 Burma Road, Oakland, CA**  
**TBPOC-PMT pre-briefing: 11:30pm – 12:00pm**  
**TBPOC meeting: 12:00pm – 2:00pm**

	<b>Topic</b>	<b>Presenter</b>	<b>Time</b>	<b>Desired Outcome</b>
<b>1.</b>	<b>CHAIR'S REPORT</b>	S. Heminger, BATA		Information
<b>2.</b>	<b>CONSENT CALENDAR</b> a. TBPOC Meeting Minutes 1. November 7, 2012 Meeting Minutes*  b. Contract Change Orders (CCOs): 1. Yerba Buena Island Transition Structures (YBITS) No. 1 Final CCO 901-S2, (Furnish & Install CCTV Security Cameras)	A. Fremier, BATA  D. Noel, CTC		Approval  Approval
<b>3.</b>	<b>PROGRESS REPORTS</b> a. Project Progress and Financial Update November 2012**	A. Fremier, BATA	10 min	Approval
<b>4.</b>	<b>PROGRAM ISSUES</b> a. Bay Bridge East Span Opening Update*  b. Senate Hearing Update	S. Maller, CTC  T. Anziano, CT	30 min  10 min	Information  Information
<b>5.</b>	<b>SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES</b> a. Corridor Update/Schedule*	T. Anziano, CT	10 min	Information
<b>6.</b>	<b>DUMBARTON BRIDGE SEISMIC RETROFIT UPDATE</b> a. Completion Event	T. Anziano, CT	10 min	Information
<b>7.</b>	<b>OTHER BUSINESS</b>			
<b>Next TBPOC Meeting: January 3, 2013, 10:00am – 1:00pm</b> <b>Mission Bay Office, 325 Burma Road, Oakland, CA</b>				

\* Attachments

\*\* Attachments at end of binder

\*\*\* Attachments to be sent under separate cover

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### **TBPOC MEETING December 13, 2012**

<b>INDEX TAB</b>	<b>AGENDA ITEM</b>	<b>DESCRIPTION</b>
<b>1</b>	<b>1</b>	<b>CHAIR'S REPORT</b>
<b>2</b>	<b>2</b>	<b>CONSENT CALENDAR</b> a. TBPOC Meeting Minutes 1) November 7, 2012 Meeting Minutes*  b. Contract Change Orders (CCOs): 1) Yerba Buena Island Transition Structures (YBITS) No. 1 Final CCO 901-S2 (Furnish & Install CCTV Security Cameras)*
<b>3</b>	<b>3</b>	<b>PROGRESS REPORTS</b> a. Project Progress and Financial Update November 2012**
<b>4</b>	<b>4</b>	<b>PROGRAM ISSUES</b> a. Bay Bridge East Span Opening Update*  b. Senate Hearing Update
<b>5</b>	<b>5</b>	<b>SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES</b> a. Corridor Update/Schedule*
<b>6</b>	<b>6</b>	<b>DUMBARTON BRIDGE SEISMIC RETROFIT UPDATE</b> a. Completion Event
<b>7</b>	<b>7</b>	<b>OTHER BUSINESS</b>

\* Attachments

\*\* Attachments at end of binder

\*\*\* Attachments to be sent under separate cover



## **ITEM 1: CHAIR'S REPORT**

**No Attachments**

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** December 5, 2012

**FR:** Andrew Fremier, Deputy Executive Director, Operations, BATA/MTC

**RE:** Agenda No. - 2a1  
Consent Calendar  
Item- TBPOC Meeting Minutes  
November 7, 2012 Meeting Minutes

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**Recommendation:**

**APPROVAL**

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

The Program Management Team has reviewed and requests TBPOC approval of the November 7, 2012 Meeting Minutes.

**Attachment(s):**

November 7, 2012 Meeting Minutes



# TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

## TBPOC MEETING MINUTES

November 7, 2012, 1:30 PM – 4:00 PM

**Attendees:** TBPOC Members: Steve Heminger (Chair), Bimla Rhinehart, and Malcolm Dougherty  
PMT Members: Tony Anziano, Andrew Fremier, and Dina Noel (for Stephen Maller)  
Participants: Michele DiFrancia, Rich Foley, John Goodwin, Ted Hall, Beatriz Lacson, Peter Lee, Bart Ney, Bijan Sartipi, and Ken Terpstra,  
Guests from Hartmann Studios/BBA: Mark Guelfi and Karim Kassab

Convened: 2:11 PM

Items		Action
1.	<b>CHAIR'S REPORT</b> <ul style="list-style-type: none"><li>The Chair noted the following:<ol style="list-style-type: none"><li>some election good news and bad news for the state transportation industry, foremost of the former of which is voter approval of Proposition 30;</li><li>ABF/Fluor Joint Venture is negotiating to construct the Tappan Zee Bridge in New York, which may or may not bode well for the SAS contract completion.</li></ol></li></ul>	
2.	<b>CONSENT CALENDAR</b> <ol style="list-style-type: none"><li>TBPOC Meeting Minutes<ol style="list-style-type: none"><li>October 4, 2012 Meeting Minutes</li></ol></li><li>Contract Change Orders (CCOs)<ol style="list-style-type: none"><li>Yerba Buena Island Transition Structures (YBITS) No. 1 CCO 72-S3 (Pre-Stressing Milestone Incentive Payment), \$7,500,000; CCO 72-S4 (Milestone 2 Incentive Payment), \$1,200,000; CCO 72-S5 (Milestone 3 Incentive Payment), \$300,000</li></ol></li></ol> <ul style="list-style-type: none"><li>In response to the Chair's query,</li></ul>	<ul style="list-style-type: none"><li>The TBPOC <b>APPROVED</b> the Consent Calendar, as presented.</li></ul>



***(Continued)***

[illegible]

(Continued)

Items	Action
<p><b>4. PROGRAM ISSUES</b></p> <ul style="list-style-type: none"> <li>a. Bay Bridge East Span Opening Update           <ul style="list-style-type: none"> <li>• A. Fremier gave a brief overview of the revised proposal for the New East Span opening celebration.</li> <li>○ M. Guelfi and K. Kassab of Hartmann Studios/Bay Bridge Alliance (BBA) presented the details on the \$5.6M revised proposal which covers most of the TBPOC's requirements, including a recap of revisions to the September proposal, celebration elements, expected attendance and cost of 1.5-day celebration, construction/celebration schedule, opening ceremony options, transportation logistics, funding sources, and recommendations.</li> </ul> </li> <li>• Staff requested TBPOC approval of the following:           <ol style="list-style-type: none"> <li>1) Proposed schedule and events itinerary for a public celebration of the 2013 East Span Opening;</li> <li>2) Request to BATA Oversight Committee to authorize use of Toll Bridge Seismic Retrofit Program funds for transportation, operations and public safety (TOPS). Additionally, the BATA Oversight Committee would also be expected to receive funding requests by BATA staff to support other initiatives related to the opening of the new Bay Bridge East Span, e.g., request for Regional Measure 2 marketing funds to make possible the purchase and distribution of special Clipper transit-fare payment cards commemorating the East Span opening.</li> </ol> </li> <li>• The TBPOC expressed their preference for staff to incorporate the new bridge in the opening ceremony.</li> <li>• In response to a query, B. Ney gave an</li> </ul>	<ul style="list-style-type: none"> <li>• The TBPOC <b>APPROVED</b> items 1 and 2, as presented, with direction to:           <ol style="list-style-type: none"> <li>a) amend the budget to include the: (1) film (private funding), (2) book (public funding), and (3) improvements to the sawtooth building (relate to TOPS and private contribution); and</li> <li>b) return to the TBPOC with the follow-up items, as discussed, i.e., (1) provide TOPS cost for the bike ride, and (2) to develop in more detail how the transit plan relates to non-ticketed access to Treasure Island (concert venue), which has the best vantage point.</li> </ol> </li> </ul>

(Continued)

Items	Action
<p>update on the new SFOBB commemorative stamp/coin proposal (in process).</p> <p>b. TBSRP Program Contingency</p> <ul style="list-style-type: none"> <li>• P. Lee stated that per AB1175, any AB144 savings shall not be shared between the State and BATA but be transferred to the Bay Area Toll Account administered by BATA.</li> </ul> <p>c. New East Span Book</p> <ul style="list-style-type: none"> <li>• T. Anziano reported that there will be a book to commemorate the New East Span and that an author is on board who is drafting an outline for TBPOC review.</li> <li>○ The TBPOC will have an opportunity to meet and talk to the author.</li> </ul>	<ul style="list-style-type: none"> <li>• Staff to explore private funding options to finance the book.</li> <li>• The TBPOC to have editorial control over the book.</li> </ul>
<p><b>5. SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES</b></p> <p>a. Corridor Update/Schedules</p> <ul style="list-style-type: none"> <li>• T. Anziano provided progress highlights of ongoing work.</li> <li>○ SAS cable wrapping is scheduled to complete by year-end.</li> <li>○ Ramification(s) of ABF's Tappan Zee Bridge contract win on personnel movement was discussed.</li> </ul> <p>b. YBITS No. 2 Bid Opening Update</p> <ul style="list-style-type: none"> <li>• T. Anziano reported that bids for the YBITS No. 2 contract were opened on October 23, 2012.</li> <li>○ Of the four bids received, the California Engineering Contractors/Silverado Contractors Joint Venture emerged as the apparent low bidder.</li> <li>○ Contract award is scheduled for late December 2012.</li> </ul>	
<p><b>6. OTHER BUSINESS</b></p> <ul style="list-style-type: none"> <li>• B. Rhinehart reported that Dr. Frieder Seible, a member of the Toll Bridge</li> </ul>	<ul style="list-style-type: none"> <li>• T. Anziano to take the lead in setting up a thank you/goodbye</li> </ul>



**(Continued)**

<b>Items</b>	<b>Action</b>
<p>Program Seismic Safety Peer Review Panel, will be moving to Australia early next year.</p> <ul style="list-style-type: none"><li>• In response to T. Anziano's query regarding TBPOC involvement in a media event for the completion of the SAS load transfer, the Chair assured the participation of at least one TBPOC member.</li><li>• The next TBPOC meeting is on December 13, 2012, 11:30am – 2:00pm, in Oakland.</li></ul>	<p>dinner for Dr. Frieder Seible in March/April 2013.</p>

Adjourned: 3:20 PM

**TBPOC MEETING MINUTES**  
November 7, 2012, 1:30 PM – 4:00 PM

**APPROVED BY:**

\_\_\_\_\_  
**STEVE HEMINGER**, TBPOC Chair  
Executive Director, Bay Area Toll Authority

\_\_\_\_\_  
Date

\_\_\_\_\_  
**BIMLA G. RHINEHART**, TBPOC Vice-Chair  
Executive Director, California Transportation Commission

\_\_\_\_\_  
Date

\_\_\_\_\_  
**MALCOLM DOUGHERTY**  
Director, California Department of Transportation

\_\_\_\_\_  
Date

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** December 5, 2012

**FR:** Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

**RE:** Agenda No. - 2b1  
Item- Consent Calendar – Contract Change Orders (CCOs)  
Yerba Buena Island Transition Structures (YBITS) No. 1 CCO 901-S2 –  
Furnish & Install CCTV Security Cameras

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**Recommendation:**  
**APPROVAL**

**Cost:**

CCO 901-S0	\$ 697,367.00	Issued September 2011
CCO 901-S1	\$ 296,672.00	Issued March 2012
CCO 901-S2:	\$ 5,359,813.00	Approved Sept. 20, 2012 for NTE \$5.4M

**Schedule Impacts:**

N/A

**Discussion:**

**CCO 901-S2 in the amount of \$5,359,813.00** is the final negotiated price for furnishing and installing 50 closed circuit television (CCTV) cameras and appurtenances for the Skyway and OTD structures and for furnishing an additional 62 CCTV cameras and appurtenances for future installation at other locations within the new east span. The TBPOC approved this CCO at their September 2012 meeting for a not-to-exceed amount of \$5,400,000.00.

CCO 901-S0 and 901-S1 provided for the installation of the fiber optic cable systems on the Skyway, OTD, and YBITS structures in preparation of the cameras' installation. CCO 901-S2 will furnish and install the actual CCTV cameras on the Skyway and OTD. The cameras will be pan-tilt and zoom-enabled with a portion having infrared or thermal imaging capabilities. Furnishing the additional 62 cameras for the other locations will eliminate the long lead delivery time required for these items and will allow for a more immediate installation of the cameras once the plans for the placement of the cameras are finalized.

The total cost for installing the Bay Area Security Enhancement (BASE) system, covered in the approved CCOs 901-S0, 901-S1, 904, SAS CCO 150 and this change order, is

## *Memorandum*

within the original approved budget of \$7,800,000.00 funded by BATA. The total estimated cost of furnishing and installing the BASE system for the entire new East Span is \$26,240,000.00, which was approved by TBPOC at their September 20, 2012 meeting. The remaining balance of \$18,440,000.00, needed to complete the East Span BASE work, requires additional approval by the BATA Commissioners.

A need assessment plan to provide a BASE system for the West Span of the SFOBB is currently being developed by the California Highway Patrol. District 4 is working with the CHP to determine the scope of work and the cost estimate.

It is anticipated that a funding approval request for the remaining \$18,440,000.00 for the East Span BASE work plus the estimated cost of providing BASE coverage for the West Span of the SFOBB, will be made at the January 2013 BATA Commissioners' meeting.

### Risk Management:

Funding for the SFOBB corridor BASE System is provided by the Bay Area Toll Authority outside of the Toll Bridge Seismic Retrofit Program (TBSRP). Therefore, this item is not included in the TBSRP Risk Management Plan.

### **Attachment(s):**

1. Draft CCO 901-S2
2. Draft CCO Memo 901-S2
3. Approved CCO & CCO Memo 901-S0 & 901-S1



**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CCO 901	Suppl. No. 2	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID
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**To: M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Perform the following work for the San Francisco Bay Bridge (east span) system in accordance with the attached drawings, Sheet Nos. 3 to 299, of this change order.

**Extra Work at Force Account:**

Furnish the following additional cameras (not included in the lump sum work item below) and supporting components, such as control panels, switches, brackets, hybrid cables and other miscellaneous equipment as directed by the Engineer. Below is the list of the major equipment to be furnished pending revisions and approval by the Engineer.

35 Cameras with Infrared option  
 17 Cameras (non-infrared)  
 4 Cameras with thermal imaging option  
 17 Control panels (each suited for 5 cameras) including all internal components (encoders, power supply, etc).  
 10,000 feet of the composite cable

Also perform miscellaneous work on existing facilities due to unforeseen field conditions or conflicts with existing components as required to perform the work of this change order as determined necessary by the Engineer.

Labor, equipment and material authorized by the Engineer, as necessary, will be paid in accordance with provisions of section 4-1.03D, "Extra Work", of the Standard Specifications and Section 5-1.17, "Force account Payment", of the Special Provisions.

Extra Work at Force Account = \$1,800,000.00

**Extra Work at Lump Sum:**

Furnish and install all necessary components of the Bay Area Security Enhancements (BASE) for the San Francisco Oakland Bay Bridge (East Span) system as specified in this change order and as shown in the drawings Sheet Nos. 3 through 299 of this change order. This work includes, but is not limited to furnishing and installing cameras and all hardware pertaining to cameras, control panels, encoders, switches, adapters, brackets, power supply, cables and any other components necessary for the operation of the camera system as specified and as shown. Any work related to networking, archiving (servers) and video management software is excluded from this change.

For this work, the Contractor shall be compensated an Agreed Lump Sum of \$3,559,813.00, which constitutes full compensation, including all markups, complete in place for this change.

Extra Work @ Agreed Lump Sum = \$3,559,813.00

All cameras for this change order are to be white in color, the camera models shall be as specified below or equivalent as approved by the Engineer.

Bosch Model MIC-550 or equivalent  
 Bosch Model MIC-550IR (with Infrared) or equivalent  
 Bosch Model MIC-612TFALW36N (Thermal Imaging) or equivalent

In addition to the cameras shown on the drawings, the Contractor will furnish:

3 additional Bosch Model MIC-550 or equivalent cameras, and  
 3 additional Bosch Model MIC-550IR (with infrared) or equivalent cameras.

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CCO 901	Suppl. No. 2	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID
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All items furnished for this change order shall be approved by the Engineer prior to their purchase ordered.

Estimated Cost: Increase ☒ Decrease ☐ \$5,359,813.00

By reason of this order the time of completion will be adjusted as follows: 0 days

**Submitted by**

Signature	Resident Engineer William Howe, Senior R.E.	Date
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**Approval Recommended by**

Signature	Region Construction Division Chief Tony Anziano	Date
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**Engineer Approval by**

Signature	Region Construction Division Chief Tony Anziano	Date
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We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

**NOTE:** If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

**Contractor Acceptance by**

Signature	(Print name and title)	Date
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**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 6/11/2012 Page 1 of 2

TO: Deanna Vilcheck, ACM /			FILE: E.A. 04 - 0120S4	
FROM: William Howe, Senior R.E.			CO-RTE-PM SF-80-12.7/13.2	
			FED. NO. NO FED AID	
CCO#: 901	SUPPLEMENT#: 2	Category Code: CBPC	CONTINGENCY BALANCE (incl. this change) <b>\$35,840,445.15</b>	
COST: <b>\$5,359,813.00</b> INCREASE <input checked="" type="checkbox"/> DECREASE <input type="checkbox"/>			HEADQUARTERS APPROVAL REQUIRED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED: <b>\$0.00</b>			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
CCO DESCRIPTION: Skyway & OTD CCTV Cameras			PROJECT DESCRIPTION: YBITS-1 (Yerba Buena Island Transition Structures)	
Original Contract Time: <b>1390</b> Day(s)	Time Adj. This Change: <b>0</b> Day(s)	Previously Approved CCO Time Adjustments: <b>0</b> Day(s)	Percentage Time Adjusted: (including this change) <b>0</b> %	Total # of Unreconciled Deferred Time CCO(s): (including this change) <b>9</b>

**THIS CHANGE ORDER PROVIDES FOR:**

Furnishing and installing closed caption television (CCTV) cameras for the Skyway and Oakland Touchdown portions of the new east span of the San Francisco Oakland Bay Bridge (SFOBB).

The new east span of the San Francisco Oakland Bay Bridge (SFOBB) is comprised of 4 main structures, the Yerba Buena Island Transition Structure (YBITS), the Self-Anchored Suspension (SAS) structure, the Skyway structure and the Oakland Touchdown (OTD) structure. The Skyway and a large component of the OTD were constructed several years ago under separate contracts with neither contract providing for the installation of closed circuit televisions.

In November of 2008, the Toll Bridge Program Oversight Committee (TBPOC) approved the SFOBB corridor wide Mechanical, Electrical and Piping (MEP) indementration strategy. The Bay Area Security Enhancements (BASE) are part of the MEP implementation strategy, with the CCTV cameras of this change order constituting part of the BASE system. The TBPOC approval for September 20, 2012, approved the corridor wide BASE implementation strategy, which covers this change order. Consistant with the implementation strategy, CCO 901, Supplement 2, was specifically approved for a Not to Exceed (NTE) amount of \$5.4 million in the September 20, 2012, TBPOC meeting. This CCO supplement finalizes the cost.

Prior to the CCTV cameras being furnished and installed under this change order, Contract Change Order No. 901-S0 and 901-S1 were issued to provide for the installation of a fiber optic cable systems throughout the Skyway, OTD and YBITS structures. This change order will furnish and install the CCTV cameras, which will be connected to the fiber optic cable systems installed under the previous change orders.

This change order will provide for 50 CCTV cameras to be furnished and installed and furnish only 6 more (spare) cameras. All cameras will be pan tilt cameras with zoom capabilities with some having infrared and thermal imaging technology. The cameras will be used to provide security surveillance of the Skyway and OTD structures and the OTD Substation.

The change order will also provide for the Contractor to furnish 56 additional CCTV cameras and appurtenances for future use on the SAS structure in order to secure these long lead time items. A future change order will be issued under the SAS contract to install these cameras once the plans for this work are finalized.

The work of furnishing and installing the CCTV cameras and appurtenances on the Skyway and OTD structures will be compensated as Extra Work at an Agreed Lump Sum of \$3,559,813.00. Any necessary corrective work required on the existing components on the Skyway and OTD structures and the furnishing of the CCTV cameras and appurtenances for the SAS structure shall be paid as Extra Work at Force Account at an estimated cost of \$1,800,000.00. The total estimated change order cost of \$5,359,813.00 shall be financed from the contract's contingency funds. A cost estimate is on file.

Additional funding of \$30,740,000 has previously been provided to this contract's contingency funds to provide for the costs of the anticipated MEP integration work to be performed under this contract. The cost of this change falls within the costs budgeted under the funding provided.

No adjustment of contract time is required as the work will not affect the controlling operation.

Concurrence will be obtained from Lina Ellis, Structures Maintenance.

Concurrence will be obtained from Ben Edalati, Senior Electrical Engineer, and Jan Vanderstoel, Associate



**CONTRACT CHANGE ORDER MEMORANDUM**

EA: 0120S4 CCO: 901 - 2

DATE: 6/11/2012

Page 2 of 2

Telecommunications Engineer.

<b>CONCURRED BY:</b>			<b>ESTIMATE OF COST</b>										
Construction Engineer:	William Howe	Date	THIS REQUEST	TOTAL TO DATE									
Bridge Engineer:	Mehran Ardakanian	Date	ITEMS	\$0.00	\$0.00								
Project Engineer:	Bob Zandipour, Design	Date	FORCE ACCOUNT	\$1,800,000.00	\$1,820,000.00								
Project Manager:	Ken Terpstra	Date	AGREED PRICE	\$3,559,813.00	\$4,534,152.00								
FHWA Rep.:		Date	ADJUSTMENT	\$0.00	\$0.00								
Environmental:		Date	<b>TOTAL</b>	<b>\$5,359,813.00</b>	<b>\$6,354,152.00</b>								
Other (specify):	Lina Ellis, Str. Maintenance	Date	<b>FEDERAL PARTICIPATION</b>										
Other (specify):		Date	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING										
District Prior Approval By:		Date	FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)										
HQ (Issue Approve) By:		Date	<input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS										
Resident Engineer's Signature:		Date	<table border="0"> <tr> <td>FEDERAL FUNDING SOURCE</td> <td>PERCENT</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> <tr> <td>_____</td> <td>_____</td> </tr> </table>			FEDERAL FUNDING SOURCE	PERCENT	_____	_____	_____	_____	_____	_____
FEDERAL FUNDING SOURCE	PERCENT												
_____	_____												
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**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CCO 901 Suppl. No. 0 Contract No. 04 - 0120S4 Road SF-80-12.7/13.2

FED. AID LOC.: NO FED AID

To: M C M CONSTRUCTION INC

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

**Extra Work at Lump Sum:**

Furnish and install fiber optic cable system, per attached drawings sheet nos. AS-17, E-600, E-601, E-602, E-603, E-604, E-605, E-606, E-607, E-608, E-609, E-610, E-611, E-612, E-613, E-614, E-615, E-616, E-617, E-618, E-619, E-620, E-620A, E-621, E-622, E-623, E-624, E-625, E-626, E-627, E-628, E-629, E-630, E-631, E-632, E-633, E-634, E-642, E-644, E-645, E-648, E-651, E-651A, E-653, E-655, E-662A, E-662B, E-663A, E-800, E-801, E-802, E-803, E-804, E-805, E-806, E-807, E-808, E-809, E-810, E-811, E-812, E-813, E-823A, E-826, E-827, E-829A, E-832, E-832A, E-1001, E-1002, E-1003, E-1004, E-1005, E-1006, E-1007, E-1008, E-1009, E-1010, E-1011, E-1012, E-1104, E-1105, E-1106, E-1107, E-1108. (Sheets 2 to 86 of this contract change order.)

The work includes excavation, trenching and backfill, and surface restoration where shown. Soil to be excavated that is identified as potentially contaminated soil shall be stockpiled by the contractor at a location designated by the engineer within 2000 meters of the excavation. Any further work with such stockpile(s) is excluded from the agreed price. The agreed price excludes the identification, handling, removal or testing of any hazardous or contaminated material.

The agreed price includes all labor, material, tools, equipment and incidentals as required. The agreed prices constitute full payment, including all markups, for this change.

Estimated cost of Extra Work at Lump Sum .....\$697,367.00

The agreed price excludes the cost of dewatering the excavation or manholes and all the costs associated with storage, treatment, testing or disposal of any water generated from a dewatering operation. These costs will be dealt under a separate change order.

Estimated Cost: Increase ☒ Decrease ☐ \$697,367.00

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by		
Signature <i>William Howe</i>	Resident Engineer William Howe, Senior R.E.	Date 07-08-11
Approval Recommended by		
Signature <i>Deanna Vilcheck</i>	Area Construction Manager Deanna Vilcheck	Date 7/8/11
Engineer Approval by		
Signature <i>Michael Fourn</i>	Area Construction Manager Deanna Vilcheck	Date 7-1-11

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

**NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.**

Contractor Acceptance by		
Signature <i>Edmundo A. Puchi</i>	(Print name and title) EDMUNDO A. PUCHI, TREASURER	Date 8/15/11

RECEIVED AUG 31 2011



**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 6/17/2011 Page 1 of 2

TO: Deanna Vilcheck, ACM /

FILE: E.A. 04 - 0120S4

FROM: William Howe, Senior R.E.

CO-RTE-PM SF-80-12.7/13.2

FED. NO. NO FED AID

CCO#: 901 SUPPLEMENT#: 0 Category Code: CBPC CONTINGENCY BALANCE (incl. this change) \$69,326,882.50

COST: \$697,367.00 INCREASE ☒ DECREASE HEADQUARTERS APPROVAL REQUIRED? ☒ YES NOSUPPLEMENTAL FUNDS PROVIDED: \$0.00 IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? ☒ YES NO**CCO DESCRIPTION:**

fiber optic cable trunk line system

**PROJECT DESCRIPTION:**

YBITS-1 (Yerba Buena Island Transition Structures)

Original Contract Time:	Time Adj. This Change:	Previously Approved CCO Time Adjustments:	Percentage Time Adjusted (including this change)	Total # of Unreconciled Deferred Time CCO(s): (including this change)
1390 Day(s)	0 Day(s)	0 Day(s)	0 %	8

**THIS CHANGE ORDER PROVIDES FOR:**

Constructing a fiber optic cable trunk line system for the Skyway and Oakland Touchdown 1, per attached drawings (Sheets 2 through 86 of the change order). The work includes pulling innerduct and fiber optic trunk line into cable trays throughout the bridge (both eastbound and westbound) as well as through the existing duct system extending from the bridge to the Mole Substation extending all the way to the Oakland substation.

This contract calls for the construction of the Yerba Buena Island Transition structures of the east span of the new San Francisco Oakland Bay Bridge (SFOBB).

The design of the new SFOBB east span was completed prior to September 11, 2001. Since the original design security measures have been extensively modified to meet the requirements of the BASE program "Bay Area Security Enhancement" CHP has required the Department to enhance security on all Bay Area Toll Bridges under the program "Bay Area Security Enhancement" (BASE). This change order implements the requirements of CHP for installation of security cameras and the needed infrastructure throughout the new SFOBB east span.

Compensation for this work shall be paid for as Extra work at lump sum at an estimated cost of \$697,367. Which will be funded from the project's contingency fund. A cost analysis is on file.

Any work pertaining to Identification, handling, removal or testing of any hazardous or contaminated material; dewatering, storage, treatment, testing or disposal of any water generated from a dewatering operation is excluded from the scope of this change order. These items will be handled either by separate change orders, or by a separate Caltrans on-call environmental services contract.

This change was requested by Steven Hulsebus, Chief, Office of Toll Bridge Design on June 13, 2011.

No adjustment of contract time is warranted, as this change will not affect the controlling operation.

**CONTRACT CHANGE ORDER MEMORANDUM**

EA: 0120S4 CCO: 901 - 0

DATE: 6/17/2011

Page 2 of 2

CONCURRED BY:			ESTIMATE OF COST		
Construction Engineer:	William Howe	Date		THIS REQUEST	TOTAL TO DATE
Bridge Engineer:	Mehran Ardakanian	Date	ITEMS	\$0.00	\$0.00
Project Engineer:	Bob Zandipour, Design	Date	FORCE ACCOUNT	\$0.00	\$0.00
Project Manager:	Ken Terpstra	Date	AGREED PRICE	\$697,367.00	\$697,367.00
FHWA Rep:		Date	ADJUSTMENT	\$0.00	\$0.00
Environmental:		Date	TOTAL	\$697,367.00	\$697,367.00
Other (specify):		Date	FEDERAL PARTICIPATION		
Other (specify):		Date	PARTICIPATING	PARTICIPATING IN PART	<input checked="" type="checkbox"/> NONE
Other (specify):		Date	NON-PARTICIPATING (MAINTENANCE) NON-PARTICIPATING		
District Prior Approval By:		Date	FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)		
HQ (Issue/Approve) By:		Date	<input checked="" type="checkbox"/> CCO FUNDED PER CONTRACT CCO FUNDED AS FOLLOWS		
Resident Engineer's Signature:		Date	FEDERAL FUNDING SOURCE PERCENT		



**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CCO 901	Suppl. No. 1	Contract No. 04 - 0120S4	Road SF-80-12.7/13.2	FED. AID LOC.: NO FED AID
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To: **M C M CONSTRUCTION INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

**Extra Work at Force Account:**

Perform work required to control groundwater intrusion and remove groundwater from manholes, as directed by the Engineer. This work will be paid for in accordance with Section 5-1.17, "Force Account Payment", of the Special Provisions and Section 4-1.03D, "Extra Work", of the Standard Specifications.

Estimated cost of Extra Work at Force Account .....\$20,000.00

**Extra Work at Lump Sum:**

Furnish and install fiber trunk lines and inner ducts for the BASE Integration in accordance with the attached drawings (Sheets 2 through 47 of this change order) for the San Francisco-Oakland East Span Seismic Safety Project, Bridge Nos. 340006L/R.

The contract plans reflecting this change are 126R2, 127R2, 128R1, 129R1, 130R4, 131R1, 132R2, 133R2, 137R1, 139R1, 140R1, 142R1, 143R1, 146R3, 148R1, 183R1, 197R2, 200R2, 225R1, 237R2, 238R2, 249R1, 250R1, 304R1, 309R1, 315R1, 323R1, 330R1, 332R1, 337R2, 344R1, 348R1, 351R1, 363R1, 392R1, 402R1, 405R2, 431R2, 434R1, 447R2, 450R1, 451R1, 474A and 483A of 806; and Plan Sheet Nos. E1102 and E-1103 (total of 46 sheets).

For this work, the Contractor shall be paid an Agreed Lump Sum amount of \$276,972.00. This agreed amount includes all labor, materials, tools, equipment and incidentals as required, and constitutes full payment, including all markups, for this change.

Extra Work at Lump Sum .....\$276,972.00

Estimated Cost: Increase ☒ Decrease ☐ **\$296,972.00**

By reason of this order the time of completion will be adjusted as follows: 0 days

Submitted by

Signature <i>William Howe</i>	Resident Engineer William Howe, Senior R.E.	Date 02-16-12
-------------------------------	------------------------------------------------	------------------

Approval Recommended by

Signature <i>Michael Fourn</i> for	Area Construction Manager Deanna Vilcheck	Date 2-17-12
------------------------------------	----------------------------------------------	-----------------

Engineer Approval by

Signature <i>Deanna Vilcheck</i>	Area Construction Manager Deanna Vilcheck	Date 3/1/12
----------------------------------	----------------------------------------------	----------------

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

**NOTE:** If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Contractor Acceptance by

Signature <i>James A. Carter</i>	(Print name and title) JAMES A. CARTER, PRESIDENT	Date 2/28/12
----------------------------------	------------------------------------------------------	-----------------



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 1/25/2012 Page 1 of 1

TO: Deanna Vilcheck, ACM / <i>MEF</i>			FILE: E.A. 04 - 0120S4	
FROM: William Howe, Senior R.E.			CO-RTE-PM SF-80-12.7/13.2	
			FED. NO. NO FED AID	
CCO#: 901	SUPPLEMENT#: 1	Category Code: CBPC	CONTINGENCY BALANCE (incl. this change) <b>\$53,718,788.00</b>	
COST: <b>\$296,972.00</b>		INCREASE <input checked="" type="checkbox"/> DECREASE <input type="checkbox"/>	HEADQUARTERS APPROVAL REQUIRED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED: <b>\$0.00</b>		IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
CCO DESCRIPTION: BASE Integration - YBITS Portion			PROJECT DESCRIPTION: YBITS-1 (Yerba Buena Island Transition Structures)	
Original Contract Time: <b>1390</b> Day(s)	Time Adj. This Change: <b>0</b> Day(s)	Previously Approved CCO Time Adjustments: <b>0</b> Day(s)	Percentage Time Adjusted: (including this change) <b>0</b> %	Total # of Unreconciled Deferred Time CCO(s): (including this change) <b>9</b>

**THIS CHANGE ORDER PROVIDES FOR:**

This change order provides furnishing and installing fiber trunk lines and innerducts for the BASE Integration at the Yerba Buena Island Transition Structure portion of the San Francisco-Oakland Bay Bridge (SFOBB).

The design of the new SFOBB east span was completed prior to September 11, 2001; therefore, no provisions for extensive security were included in the original design. The California Highway Patrol (CHP) has required the Department to enhance security on all Bay Area Toll Bridges under the program "Bay Area Security Enhancement" (BASE). This change order implements the requirements of CHP for installation of security cameras and the needed infrastructure throughout the new SFOBB east span.

Contract Change Order No. 901 was issued for enhanced security measures at the Oakland Touchdown and Skyway portions of the SFOBB. This supplemental change order is issued for enhanced security measures at the Yerba Buena Island Transition Structure portion.

Compensation for this work shall be paid at an Agreed Lump Sum of \$276,972.00. Work to control groundwater and remove groundwater from manholes will be paid as Extra Work @ Force Account for the amount of \$20,000.00. The total amount of this change order is \$296,972.00, which will be funded from the project's contingency fund. A cost analysis is on file.

No adjustment of contract time is warranted, as this change will not affect the controlling operation.

This change was requested by Steven Hulsebus, District Division Chief, Office of Toll Bridge Design, on 2/8/12.

Maintenance concurrence for this change will be obtained.

<b>CONCURRED BY:</b>			<b>ESTIMATE OF COST</b>	
Construction Engineer: William Howe	Date: 02-16-12		THIS REQUEST	TOTAL TO DATE
Bridge Engineer: Mehran Ardakanian	Date:		ITEMS	\$0.00
Project Engineer: Bob Zandipour, Design	Date: 2-17-12		FORCE ACCOUNT	\$20,000.00
Project Manager: Ken Terpstra	Date: 3-1-12		AGREED PRICE	\$276,972.00
FWHA Rep.:	Date:		ADJUSTMENT	\$0.00
Environmental:	Date:		<b>TOTAL</b>	<b>\$296,972.00</b>
Other (specify): Lina Ellis, Str. Maintenance	Date: 2-17-12		<b>FEDERAL PARTICIPATION</b>	
Other (specify): Steven Hulsebus, Toll Bridge Desi	Date: 2/8/12		<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING	
District Prior Approval By:	Date:		FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)	
HQ (Issue Approve) By: Larry Salhaney	Date: 2-17-12		<input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS	
Resident Engineer's Signature:	Date:		FEDERAL FUNDING SOURCE	PERCENT
<i>William Howe</i>	02-16-12			

**TO:** Toll Bridge Program Oversight Committee      **DATE:** December 5, 2012  
(TBPOC)

**FR:** Andrew Fremier, Deputy Executive Director, Operations, BATA/MTC

**RE:** Agenda No. - 3a  
Progress Reports  
Item- Project Progress and Financial Update November 2012

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**Recommendation:**  
**APPROVAL**

**Cost:**  
N/A

**Schedule Impacts:**  
N/A

**Discussion:**  
By meeting time, the PMT would have approved the final Project Progress and Financial Update November 2012 under a delegated TBPOC authority. TBPOC confirmation of this approval is requested.

**Attachment(s):**  
Project Progress and Financial Update November 2012 (see end of binder)





# San Francisco Bay Area Toll Bridge Seismic Retrofit and Regional Measure 1 Programs

**Project Progress  
and Financial Update**  
**November 2012**



**TOLL BRIDGE PROGRAM  
OVERSIGHT COMMITTEE**

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

**Released: December 2012**



The New San Francisco-Oakland Bay Bridge Self-Anchored Suspension Bridge and Tower , Catwalks and Suspender Cables Looking West Toward San Francisco







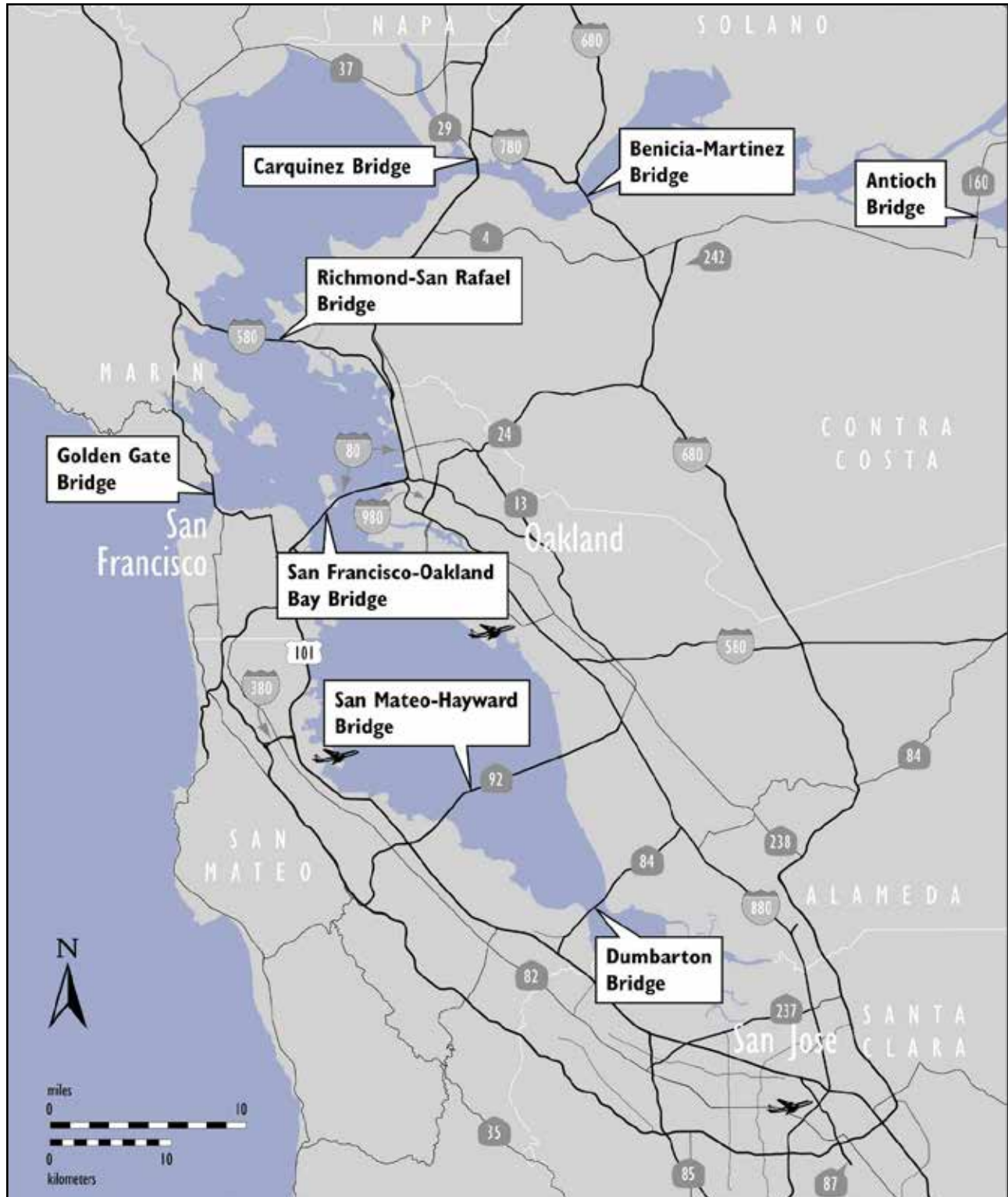
San Francisco - Oakland Bay Bridge Suspension Bridge Cable  
Wrapping Wire

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## Map of Bay Area Toll Bridges



\* The Golden Gate Bridge is owned and operated by the Golden Gate Bridge, Highway and Transportation District.

## Introduction

In July 2005, Assembly Bill (AB) 144 (Hancock) created the Toll Bridge Program Oversight Committee (TBPOC) to implement a project oversight and project control process for the new Benicia-Martinez Bridge and State Toll Bridge Seismic Retrofit Program projects. The TBPOC consists of the Director of the California Department of Transportation (Caltrans), the Executive Director of the Bay Area Toll Authority (BATA) and the Executive Director of the California Transportation Commission (CTC). The TBPOC's project oversight and control processes include, but are not limited to, reviewing bid specifications and documents, reviewing and approving significant change orders and claims in excess of \$1 million (as defined by the Committee), and keeping the Legislature and others apprised of current project progress and status. In January 2010, Assembly Bill (AB) 1175 (Torlakson) amended the TBSRP to include the Antioch and Dumbarton Bridges seismic retrofit projects. The current Toll Bridge Seismic Retrofit Program is as follows:

Toll Bridge Seismic Retrofit Projects	Seismic Safety Status
Dumbarton Bridge Seismic Retrofit	Construction
Antioch Bridge Seismic Retrofit	Complete
San Francisco-Oakland Bay Bridge East Span Replacement	Construction
San Francisco-Oakland Bay Bridge West Approach Replacement	Complete
San Francisco-Oakland Bay Bridge West Span Seismic Retrofit	Complete
San Mateo-Hayward Bridge Seismic Retrofit	Complete
Richmond-San Rafael Bridge Seismic Retrofit	Complete
1958 Carquinez Bridge Seismic Retrofit	Complete
1962 Benicia-Martinez Bridge Seismic Retrofit	Complete
San Diego-Coronado Bridge Seismic Retrofit	Complete
Vincent Thomas Bridge Seismic Retrofit	Complete

The New Benicia-Martinez Bridge is part of a larger program of toll-funded projects called the Regional Measure 1 (RM1) Toll Bridge Program under the responsibility of BATA and Caltrans. While the rest of the projects in the RM1 program are not directly under the responsibility of the TBPOC, BATA and Caltrans will continue to report on their progress as an informational item. The RM1 program includes:

Regional Measure 1 Projects	Open to Traffic Status
Interstate 880/State Route 92 Interchange Reconstruction	Open
1962 Benicia-Martinez Bridge Reconstruction	Open
New Benicia-Martinez Bridge	Open
Richmond-San Rafael Bridge Deck Overlay Rehabilitation	Open
Richmond-San Rafael Bridge Trestle, Fender & Deck Joint Rehabilitation	Open
Westbound Carquinez Bridge Replacement	Open
San Mateo-Hayward Bridge Widening	Open
State Route 84 Bayfront Expressway Widening	Open
Richmond Parkway	Open



## SUMMARY OF MAJOR PROJECT HIGHLIGHTS, ISSUES, AND ACTIONS



Self-Anchored Suspension Bridge Wire Wrapping Machine in Use on North Back Span Cable



Self-Anchored Suspension Bridge Hinge K Eastbound Falsework Installed



Self-Anchored Suspension Bridge Temporary Truss Structure Being Removed

### Toll Bridge Seismic Retrofit Program Risk Management

A major element of the 2005 AB 144, the law creating the TBPOC, was legislative direction to implement a more aggressive risk management program. Such a program has been implemented in stages over time to ensure development of a robust and comprehensive approach to risk management.

A comprehensive risk assessment is performed for each project in the program on a quarterly basis. Based upon those assessments, a forecast is developed using the average cost of risk. These forecasts can both increase and decrease as risks are identified, resolved or retired. Nonetheless, assurances have been made that the public is informed of the risks that have been identified and the possible expense they could necessitate.

The program contingency is currently \$329 million in accordance with the TBPOC Approved Budget. As of the end of the third quarter of 2012, the 50 percent probable draw on program contingency is \$144 million. The potential draw ranges from about \$60 million to \$200 million.

The current program contingency balance is sufficient to cover the cost of currently identified risks. In accordance with the approved TBSRP Risk Management Plan, risk mitigation actions are continuously developed and implemented to reduce the potential draw on the program contingency.

### San Francisco-Oakland Bay Bridge (SFOBB) East Span Seismic Replacement Project SAS Superstructures Contract

A joint venture of American Bridge/Fluor (ABF) is constructing the signature Self-Anchored Suspension (SAS) section of the new east span of the San Francisco-Oakland Bay Bridge. The SAS is a self-anchoring suspension span with one main cable that anchors to the eastern end of the roadway deck, rather than to the ground anchorages. Now with all major bridge components in place, i.e. the tower, roadway deck, and main cable and suspenders, work is now on-going to transfer the weight of the span from the temporary supports to the main cable, a complex time- and labor-intensive process known as load transfer.

Load transfer began on September 4, 2012 and is expected to be completed in November 2012. Two hundred steel wire suspender ropes, attached to 100 cable bands along the single main cable, do the heavy lifting during load transfer. Sets of suspender ropes are gradually tensioned using hydraulic jacks; as each cable band carries two ropes, there are four hydraulic jacks (each exerting as much as 400 tons of force) at each corresponding location along the outside of the road-decks tensioning and pulling the ropes into position. Following load transfer, remaining critical activities include wrapping of the main cable, painting, paving, striping, and installing and testing of the bridge's mechanical, electrical, and plumbing systems. The TBPOC's goal is to open the bridge to traffic in both directions by September 2013.



Hinge K Westbound Deck Concrete Placed

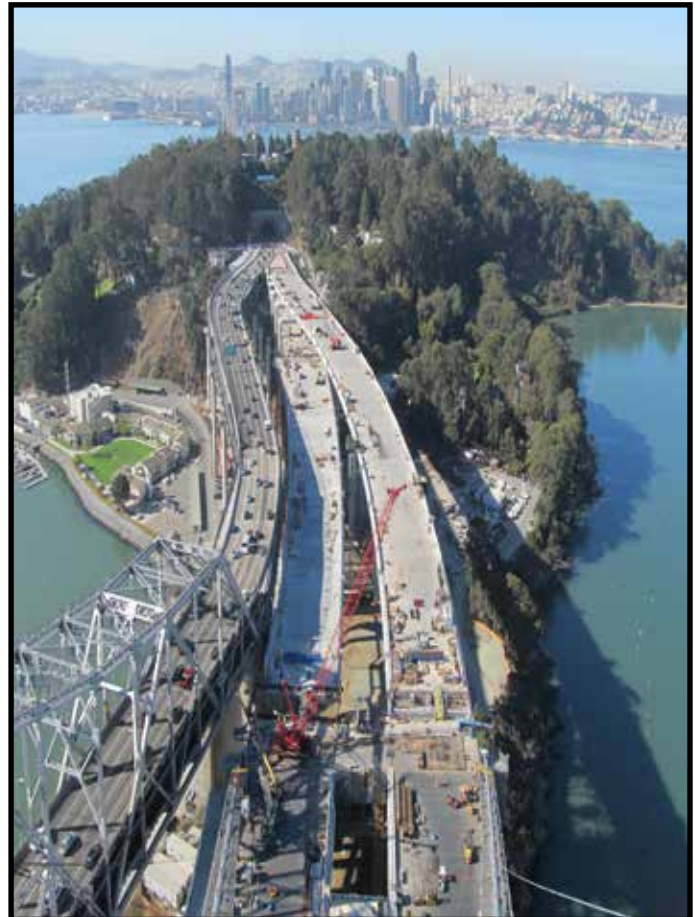
## Yerba Buena Island Transition Structure #1 Contract

MCM Construction, Inc. is the prime contractor constructing the Yerba Buena Island Transition Structure #1 (YBITS #1) contract. Their work includes completing the remaining foundations and the bridge deck structure from the existing double deck Yerba Buena Island Tunnel to the SAS bridge.

MCM has substantially completed both the eastbound and westbound transition structures from the tunnel to the Hinge K area and transferred the remaining hinge area over to the SAS contractor on September 2, 2012.

## Yerba Buena Island Transition Structure #2 and Cantilever Demolition Contract

The YBITS #2 contract will demolish the detour viaduct after all traffic is shifted to the new bridge and will construct a new eastbound on-ramp to the bridge in its place. The contract also includes the cantilever truss demolition, which was advertised on April 9, 2012. The bid was opened on October 23, 2012, with award of the contract scheduled for December 22, 2012. Initial startup activities are planned to begin in March 2013 with actual dismantling to start in September 2013.



San Francisco-Oakland Bay Bridge SAS, YBITS and YBID Eastbound and Westbound Construction Overview



## SUMMARY OF MAJOR PROJECT HIGHLIGHTS, ISSUES, AND ACTIONS



**Oakland Detour #2 Light Concrete Foundation and Precast Wall for Permanent New Structure under Construction**



**Existing San Francisco-Oakland Bay Bridge Cantilever Section to be Dismantled as Part of the YBITS #2 Contract**



**Existing San Francisco-Oakland Bay Bridge on right and new Skyway on left**

### Oakland Touchdown #2 Contract

Flatiron West, Inc. is the prime contractor constructing the Oakland Touchdown #2 contract that will complete the remaining portions of the Oakland Touchdown approach structures from the existing toll plaza to the new span. The westbound structure and portions of the eastbound structure (not in conflict with the existing span) were constructed under the Oakland Touchdown #1 contract. The OTD #2 construction contract started on June 25, 2012. The contractor is working on the eastbound approach structure completing the abutment wall in August and is now in the process of installing falsework and the soffit. The contractor had to construct a temporary access trestle to maintain construction access for the SAS contract from the Oakland side of the bridge. The mainline structure work is scheduled to be completed in early 2013 for bridge opening. After bridge opening, the contractor will complete landscaping of the area and constructing the remaining portion of the permanent bicycle/pedestrian pathway by 2014 that is in conflict with the existing bridge.

### Existing SFOBB Dismantling Contracts

To expedite the opening of a new eastbound on-ramp and the pedestrian/bicycle pathway from Yerba Buena Island, the TBPOC has decided to split the bridge dismantling project into at least two contracts. The dismantling of the superstructure of the main cantilever section of the existing bridge has been incorporated into the YBITS #2 contract, while the remaining portions of the existing bridge will be removed by separate contract(s) still in design.

### Antioch Bridge Seismic Retrofit

The major retrofit strategy for the bridge includes installing seismic isolation bearings at each of the 41 piers, strengthening piers 12 through 31 with steel cross-bracing between column bents, and installing steel casings at all columns located at the Sherman Island approach slab bridge. Seismic safety opening was achieved on April 12, 2012 and contract was completed on July 13, 2012.

### Dumbarton Bridge Seismic Retrofit

The Dumbarton Bridge is a combination of three bridge types; reinforced concrete slab approaches supported on multiple pile extension columns, precast pre-stressed concrete girders and steel box girders supported on reinforced concrete piers. The retrofit strategy for the bridge includes superstructure and deck modifications and installation of isolation bearings. The Dumbarton Bridge was closed to traffic for the second time this year during Labor Day weekend. A full bridge closure was necessary in order for crews to replace the existing expansion joint on the eastern side of the bridge at Pier 31 with a state-of-the-art seismic joint.



Antioch Bridge

# Toll Bridge Seismic Retrofit Program Cost Summary (Millions)

	Contract Status	AB 144/SB 66 Budget (September 2005)	TBPOC Approved Changes	Current TBPOC Approved Budget (October 2012)	Cost to Date (October 2012)	Current Cost Forecast (October 2012)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
<b>SFOBB East Span Seismic Replacement</b>								
Capital Outlay Construction								
Skyway	Completed	1,293.0	(55.8)	1,237.2	1,237.2	1,237.2	-	●
SAS Marine Foundations	Completed	313.5	(38.7)	274.8	274.8	278.6	3.8	●
SAS Superstructure	Construction	1,753.7	293.1	2,046.8	1,725.0	2,047.2	0.4	●
YBI Detour	Completed	131.9	334.2	466.1	466.1	473.3	7.2	●
YBI Transition Structures (YBITS)		299.3	(37.3)	262.0	170.6	309.6	47.6	●
YBITS 1	Construction			199.7	170.6	225.8	26.1	●
YBITS 2 Cantilever and Demo	Bids Opened			59.0	-	80.5	21.5	●
YBITS Landscaping	Design			3.3	-	3.3	-	●
Oakland Touchdown (OTD)		283.8	43.8	327.6	216.3	326.6	(1.0)	●
OTD 1	Completed			205.0	203.0	203.3	(1.7)	●
OTD 2	Construction			62.0	7.5	60.5	(1.5)	●
Detour	Completed			51.0	-	48.8	(2.2)	●
OTD Electrical Systems	Design			-	-	4.4	4.4	●
Submerged Electric Cable	Completed			9.6	5.7	9.6	-	●
Existing Bridge Demolition	Design	239.2	(0.1)	239.1	-	231.4	(7.7)	●
*Cantilever Section	Bids Opened			-	-	60.5		●
*504/288 Sections	Design			-	-	64.3		●
*Marine Foundations	Design			-	-	106.6		●
Stormwater Treatment Measures	Completed	15.0	3.3	18.3	16.8	18.3	-	●
Other Completed Contracts	Completed	90.4	(0.4)	90.0	90.0	90.5	0.5	●
Capital Outlay Support		959.3	262.2	1,221.5	1,091.8	1,284.3	62.8	●
Right-of-Way and Environmental Mitigation		72.4	-	72.4	51.7	80.4	8.0	●
Other Budgeted Capital		35.1	(3.3)	31.8	0.7	7.7	(24.1)	●
<b>Total SFOBB East Span Replacement</b>		<b>5,486.6</b>	<b>801.0</b>	<b>6,287.6</b>	<b>5,341.0</b>	<b>6,385.1</b>	<b>97.5</b>	
<b>Antioch Bridge Seismic Retrofit</b>								
Capital Outlay Construction and Mitigation	Completed		51.0	51.0	47.0	50.3	(0.7)	●
Capital Outlay Support			31.0	31.0	23.4	24.5	(6.5)	●
<b>Total Antioch Bridge Seismic Retrofit</b>		<b>-</b>	<b>82.0</b>	<b>82.0</b>	<b>70.4</b>	<b>74.8</b>	<b>(7.2)</b>	●
<b>Dumbarton Bridge Seismic Retrofit</b>								
Capital Outlay Construction and Mitigation	Construction		92.7	92.7	55.5	71.9	(20.8)	●
Capital Outlay Support			56.0	56.0	39.7	56.0	-	●
<b>Total Dumbarton Bridge Seismic Retrofit</b>		<b>-</b>	<b>148.7</b>	<b>148.7</b>	<b>95.2</b>	<b>127.9</b>	<b>(20.8)</b>	●
Other Program Projects		2,268.4	(63.6)	2,204.8	2,163.7	2,192.2	(12.6)	
Miscellaneous Program Costs		30.0	-	30.0	25.5	30.0	-	●
<b>Net Programmatic Risks</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>87.1</b>	<b>87.1</b>	●
<b>Program Contingency</b>		<b>900.0</b>	<b>(571.1)</b>	<b>328.9</b>	<b>-</b>	<b>184.9</b>	<b>(144.0)</b>	●
<b>Total Toll Bridge Seismic Retrofit Program<sup>2</sup></b>		<b>8,685.0</b>	<b>397.0</b>	<b>9,082.0</b>	<b>7,695.8</b>	<b>9,082.0</b>	<b>-</b>	

## Toll Bridge Seismic Retrofit Program Schedule Summary

	AB 144/SB 66 Project Completion Schedule Baseline (July 2005)	TBPOC Approved Changes (Months)	Current TBPOC Approved Completion Schedule (October 2012)	Current Completion Forecast (October 2012)	Schedule Variance (Months)	Schedule Status	Remarks/ Notes
	g	h	i = g + h	j	k = j - i	l	
<b>SFOBB East Span Seismic Replacement</b>							
Contract Completion							
Skyway	Apr 2007	8	Dec 2007	Dec 2007	-	●	See Page 24
SAS Marine Foundations	Jun 2008	(5)	Jan 2008	Jan 2008	-	●	See Page 18
SAS Superstructure	Mar 2012	29	Aug 2014	Aug 2014	-	●	See Page 19
YBI Detour	Jul 2007	39	Oct 2010	Oct 2010	-	●	See Page 15
YBI Transition Structures (YBITS)	Nov 2013	27	Feb 2016	Feb 2016	-	●	See Page 16
YBITS 1			Dec 2013	Dec 2013	-	●	
YBITS 2			Feb 2016	Feb 2016	-	●	
Oakland Touchdown	Nov 2013	10	Sep 2014	Sep 2014	-	●	See Page 25
OTD 1			Jun 2010	Jun 2010	-	●	
OTD 2			Sep 2014	Sep 2014	-	●	
Submerged Electric Cable			Jan 2008	Jan 2008	-	●	
Existing Bridge Demolition	Sep 2014	18	Dec 2015	March 2017	15	●	
Stormwater Treatment Measures	Mar 2008		Mar 2008	Mar 2008	-	●	
<b>SFOBB East Span Bridge Opening and Other Milestones</b>							
Westbound Seismic Safety Open	Sep 2011	27	Dec 2013	Sep 2013	(3)	●	
Eastbound Seismic Safety Open	Sep 2012	15	Dec 2013	Sep 2013	(3)	●	
Bike/Ped Pathway Open to YBI			Sep 2015	Sep 2015	-	●	
Permanent Eastbound On Ramp Open			Sep 2015	Sep 2015	-	●	
Oakland Detour Eastbound Open			May 2011	May 2011	-	●	
Oakland Detour Westbound Open			Feb 2012	Feb 2012	-	●	
OTD Westbound Access			Aug 2009	Aug 2009	-	●	
YBI Detour Open			Sep 2009	Sep 2009	-	●	See Page 15
<b>Antioch Bridge Seismic Retrofit</b>							
Contract Completion			Jul 2012	Jul 2012	-	●	See Page 34
Seismic Safety Completion			Apr 2012	Apr 2012	-	●	
<b>Dumbarton Bridge Seismic Retrofit</b>							
Contract Completion			Sep 2013	Mar 2013	(6)	●	See Page 30
Seismic Safety Completion			Sep 2013	Mar 2013	(6)	●	

● Within approved schedule and budget

● Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated

● Known project impacts with forthcoming changes to approved schedules and budgets

<sup>(1)</sup> Figures may not sum up to totals due to rounding effects.

<sup>(2)</sup> Construction administration of the OTD Detour is under the YBITS#1 contract.

<sup>(3)</sup> Construction administration of the Cantilever segment will be under the YBITS#2 contract.

## Regional Measure 1 Program Cost Summary (Millions)

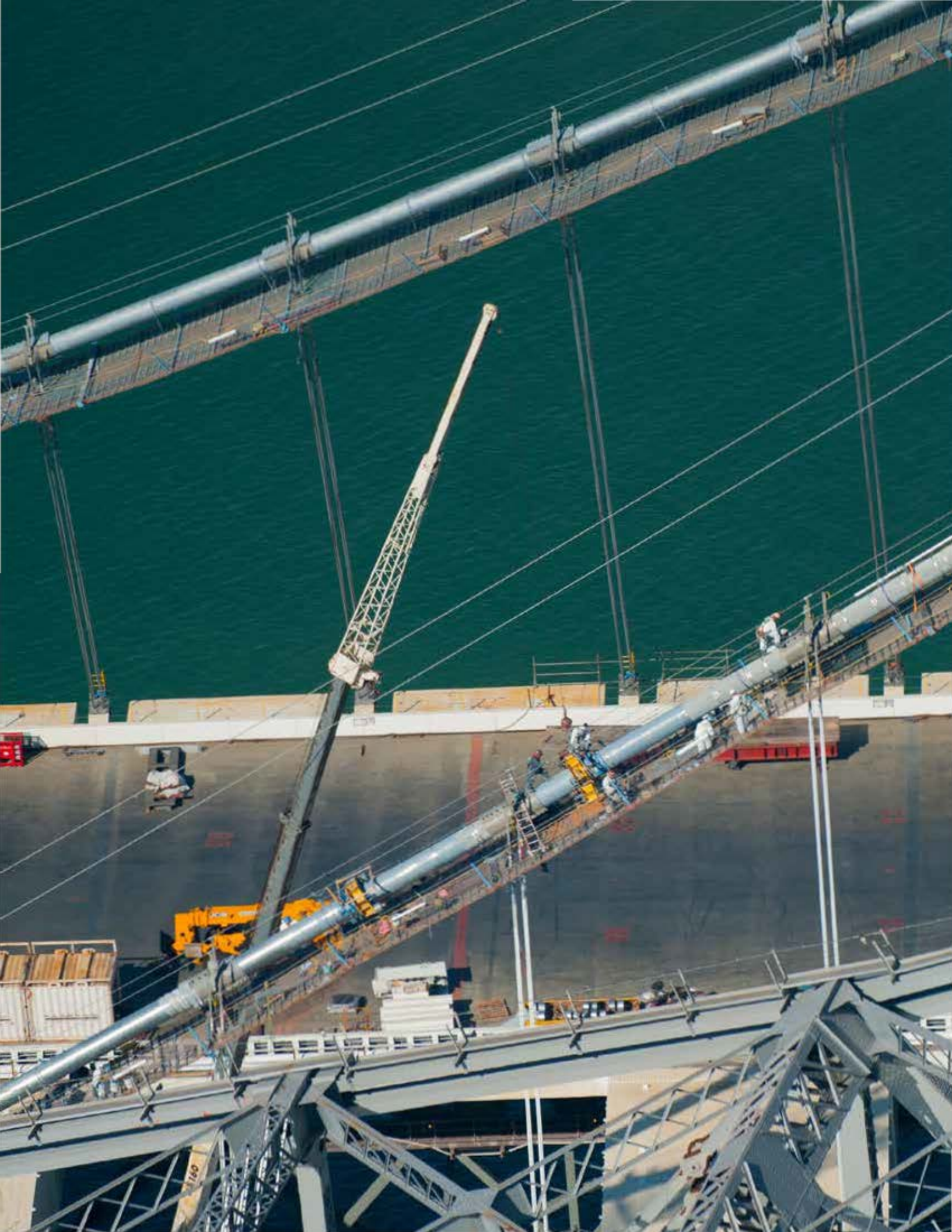
	Contract Status	BATA Baseline Budget (July 2005)	BATA Approved Changes	Current BATA Approved Budget (October 2012)	Cost to Date (October 2012)	Current Cost Forecast (October 2012)	Cost Variance	Cost Status
		a	b	c = a + b	d	e	f = e - c	
<b>Interstate 880/Route 92 Interchange Reconstruction</b>								
Capital Outlay Construction	Complete	94.8	68.4	163.2	150.2	163.2	-	●
Capital Outlay Support		28.8	35.8	64.6	62.2	64.6	-	●
Capital Outlay Right-of-Way		9.9	7.3	17.2	14.7	17.2	-	●
Project Reserve		0.3	(0.3)	-	-	-	-	
<b>Total I-880/SR-92 Interchange Reconstruction</b>		<b>133.8</b>	<b>111.2</b>	<b>245.0</b>	<b>227.1</b>	<b>245.0</b>	<b>-</b>	
Other Completed Program Projects		1,978.8	182.6	2,161.4	2,089.2	2,161.4	-	
<b>Total Regional Measure 1 Toll Bridge Program <sup>1</sup></b>		<b>2,112.6</b>	<b>293.8</b>	<b>2,406.4</b>	<b>2,316.3</b>	<b>2,406.4</b>	<b>-</b>	

- Within approved schedule and budget
  - Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated
  - Known project impacts with forthcoming changes to approved schedules and budgets
- <sup>1</sup> Figures may not sum up to totals due to rounding effects.

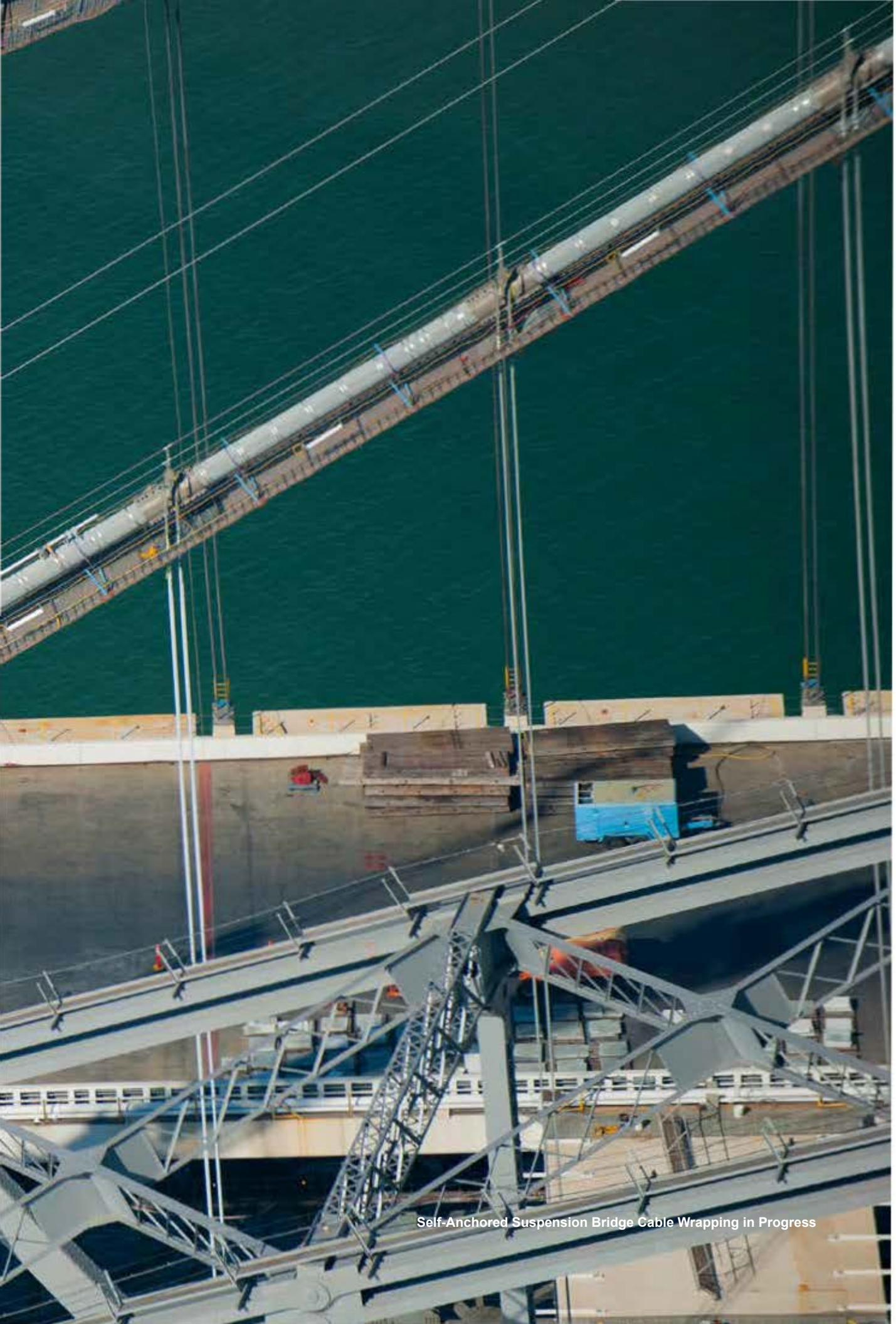


## Regional Measure 1 Program Schedule Summary

	BATA Baseline Completion Schedule (September 2005)	BATA Approved Changes (Months)	Current BATA Approved Completion Schedule (October 2012)	Current Completion Forecast (October 2012)	Schedule Variance (Months)	Schedule Status	Remarks/Notes
	g	h	i = g + h	j	k = j - i	l	
<a href="#">Interstate 880/Route 92 Interchange Reconstruction</a>							
Contract Completion							
Interchange Reconstruction	Dec 2010	9	Sep 2011	Sep 2011	-	●	See Page 45







Self-Anchored Suspension Bridge Cable Wrapping in Progress

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge Seismic Retrofit Strategy

When a 250-ton section of the upper deck of the East Span collapsed during the 7.1-magnitude Loma Prieta Earthquake in 1989, it was a wake-up call for the entire Bay Area. While the East Span quickly reopened within a month, a critical question lingered: How could the Bay Bridge - a vital regional lifeline structure - be strengthened to withstand the next major earthquake? Seismic experts from around the world determined that to make each separate element seismically safe on a bridge of this size, the work must be divided into numerous projects. Each project presents unique challenges. Yet there is one common challenge - the need to accommodate the more than 280,000 vehicles that cross the bridge each day.



West Approach Overview

#### West Approach Seismic Replacement Project

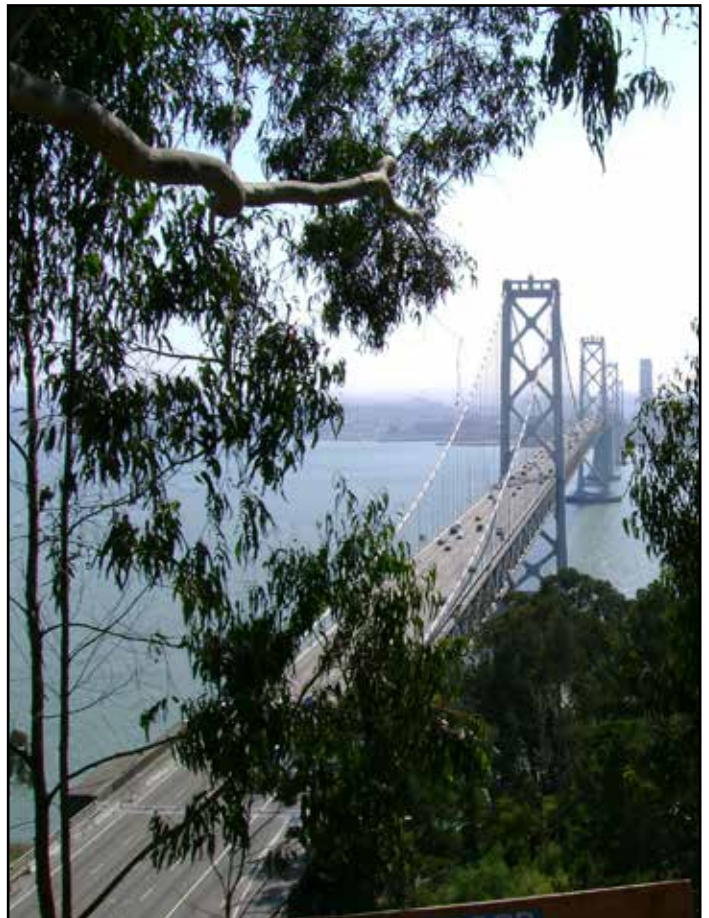
**Project Status: Completed 2009**

Seismic safety retrofit work on the West Approach in San Francisco, bounded on the west by Fifth Street and on the east by the anchorage of the west span at Beale Street, involved completely removing and replacing this one-mile stretch of Interstate 80, as well as six on-and off-ramps within the confines of the West Approach's original footprint. This project was completed on April 8, 2009.

#### West Span Seismic Retrofit Project

**Project Status: Completed 2004**

The West Span lies between Yerba Buena Island and San Francisco and is made up of two complete suspension spans connected at a center anchorage. Retrofit work included adding massive amounts of steel and concrete to strengthen the entire West Span, along with new seismic shock absorbers and bracing.



San Francisco-Oakland Bay Bridge West Span



## East Span Seismic Replacement Project

### Project Status: **In Construction**

Rather than a seismic retrofit, the two-mile long East Span is being completely rebuilt. When completed, the new East Span will consist of several different sections, but will appear as a single streamlined span. The eastbound and westbound lanes of the East Span will no longer include upper and lower decks. The lanes will instead be side-by-side, providing motorists with expansive views of the bay. These views will also be enjoyed by bicyclists and pedestrians, thanks to a new bike/pedestrian path on the south side of the bridge that will extend all the way to Yerba Buena Island. The new span is aligned north of the existing bridge to allow traffic to continue to flow on the existing bridge as crews build the new span.

The new span will feature the world's longest Self-Anchored Suspension (SAS) bridge that will be connected to an elegant roadway supported by piers (Skyway), which will gradually slope down toward the Oakland shoreline (Oakland Touchdown). A new transition structure on Yerba Buena Island (YBI) will connect the SAS to the YBI Tunnel and will transition the East Span's side-by-side traffic to the upper and lower decks of the tunnel and West Span.

When construction of the new East Span has been completed and vehicles have been safely rerouted to it, the original East Span will be demolished.



The Self-Anchored Suspension Bridge Tower and Roadway Deck Showing Suspender Cable Installation in Progress



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Summary

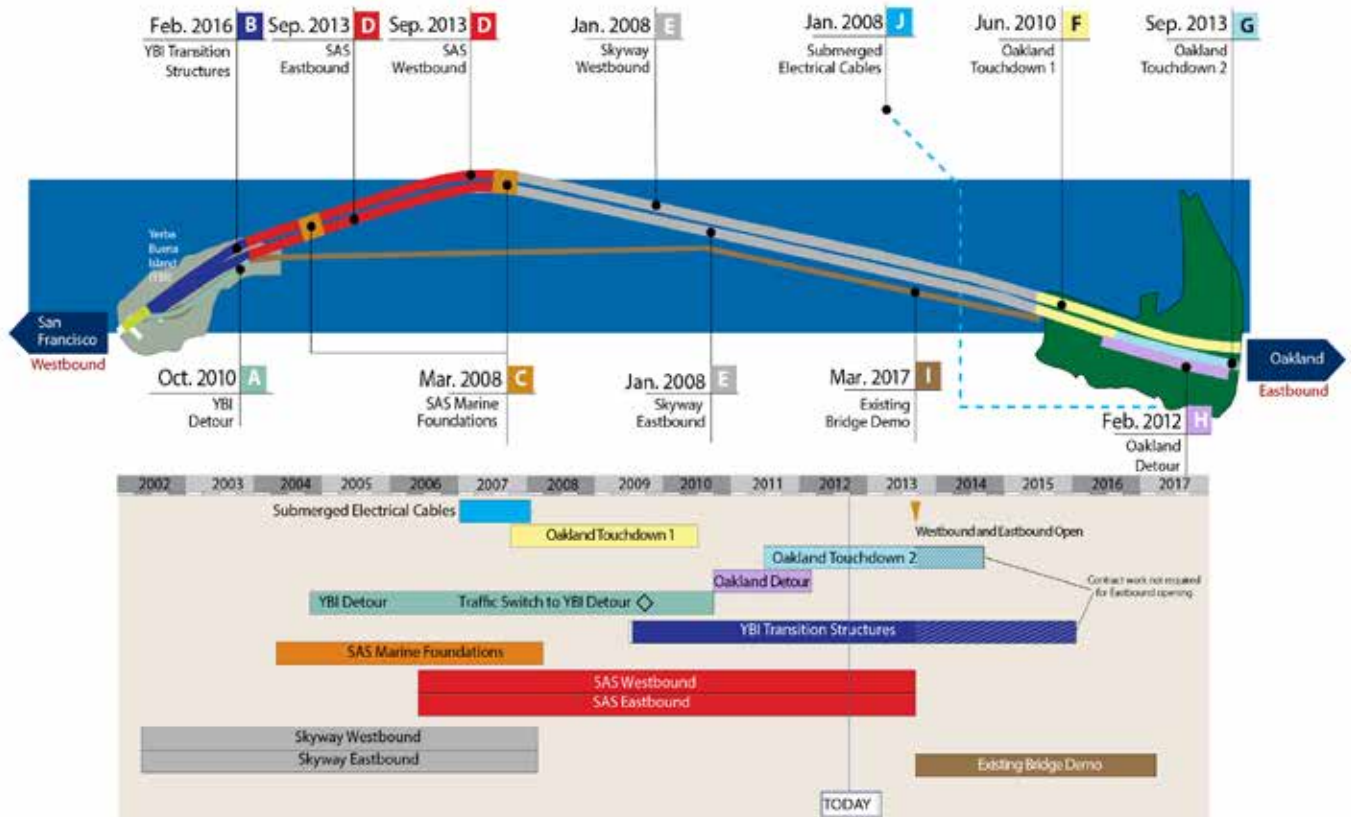
The new East Span bridge can be split into four major components - the Skyway, the Self-Anchored Suspension bridge in the middle, the Yerba Buena Island Transition Structures and Oakland Touchdown approaches. Each component is being constructed by one to three separate contracts that have been sequenced together to reduce schedule risk.

Highlighted below are the major East Span contracts and their schedules. The letter designation before each contract corresponds to contract descriptions in the report.



Overview of the San Francisco-Oakland Bay Bridge East Span Construction Progress

### SFOBB East Span Work Sequence



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Yerba Buena Island Detour (YBID)

As with all of the Toll Bridge Seismic Retrofit Program's projects, crews built the Yerba Buena Island Detour (YBID) structure without disrupting traffic. To accomplish this task, YBID eastbound and westbound traffic was shifted off the existing roadway and onto a temporary detour over Labor Day weekend 2009. Drivers will use this detour, just south of the original roadway, until traffic is moved onto the new East Span.

#### A YBID Contract

Contractor: C.C. Myers, Inc.

Approved Capital Outlay Budget: \$466.1 M

Status: Completed October 2010

This contract was originally awarded in early 2004 to construct the detour structure for the planned 2006 opening of the new East Span. Because of a lack of funding, the SAS Superstructure contract was re-advertised in 2005 and the opening was rescheduled to 2013. To better integrate the contract into the current East Span schedule and to improve seismic safety and mitigate future construction risks, the TBPOC approved a number of changes to the contract, including adding the deck replacement work near the tunnel that was rolled into place over the Labor Day 2007 weekend advancing future transition structure foundation work and making design enhancements to the temporary detour structure. These changes increased the budget and forecast for the contract to cover the revised project scope and reduce project risks.



YBID East Tie-In Rolled in on Labor Day 2009 Weekend



West Tie-In Phase # 1 Rolled in on Labor Day Weekend 2007

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Yerba Buena Island Transition Structures (YBITS)

The new Yerba Buena Island Transition Structures contract (YBITS) will connect the new SAS bridge span to the existing Yerba Buena Island Tunnel, transitioning the new side-by-side roadway decks to the upper and lower decks of the tunnel. The new structures will be cast-in-place reinforced concrete structures that will look very similar to the already constructed Skyway structures. While some YBITS foundations and columns were advanced by the YBID contract, the remaining work is being completed under three separate YBITS contracts.

#### **B** YBITS #1 Contract

Contractor: MCM Construction, Inc.

Approved Capital Outlay Budget: \$199.7 M

Status: 65% Complete as of October 2012

MCM Construction, Inc. is the prime contractor constructing the Yerba Buena Island Transition Structure #1 (YBITS #1) contract. Their work includes completing the remaining foundations and the bridge deck structure from the existing double deck Yerba Buena Island Tunnel to the SAS bridge.

**Status:** MCM has substantially completed both the eastbound and westbound transition structures from the tunnel to the Hinge K area and transferred the Hinge K west area over to the SAS contractor on September 2, 2012, and the Hinge K east area on October 2, 2012.

#### YBITS #2 and Cantilever Demolition Contract

Approved Capital Outlay Budget: \$59.0 M

Contractor: TBD

Status: Bids Opened

The YBITS #2 contract will demolish the detour viaduct after all traffic is shifted to the new bridge and will construct a new eastbound on-ramp to the bridge in its place. The new ramp will also provide the final link for bicycle/pedestrian access off the SAS bridge onto Yerba Buena Island. To expedite opening of a new eastbound on-ramp and the pedestrian/bicycle pathway from Yerba Buena Island, the TBPOC has decided to split the bridge dismantling project into at least two contracts. The dismantling of the superstructure of the main cantilever section of the existing bridge will be incorporated into the YBITS #2 contract, while the remaining portions of the existing bridge will be removed by separate contract or contracts yet to be determined.

Status: The YBITS #2 contract, which includes the cantilever truss demolition, was advertised on April 9, 2012. The bids opened on October 23, 2012. Award of the contract is scheduled for December 22, 2012. Initial startup activities are planned to begin in March 2013 with actual dismantling to begin in September 2013. The contract is forecast for award on November 28, 2012.

#### YBITS Landscaping Contract

Contractor: TBD

Approved Capital Outlay Budget \$3.3 M

Status: In Design

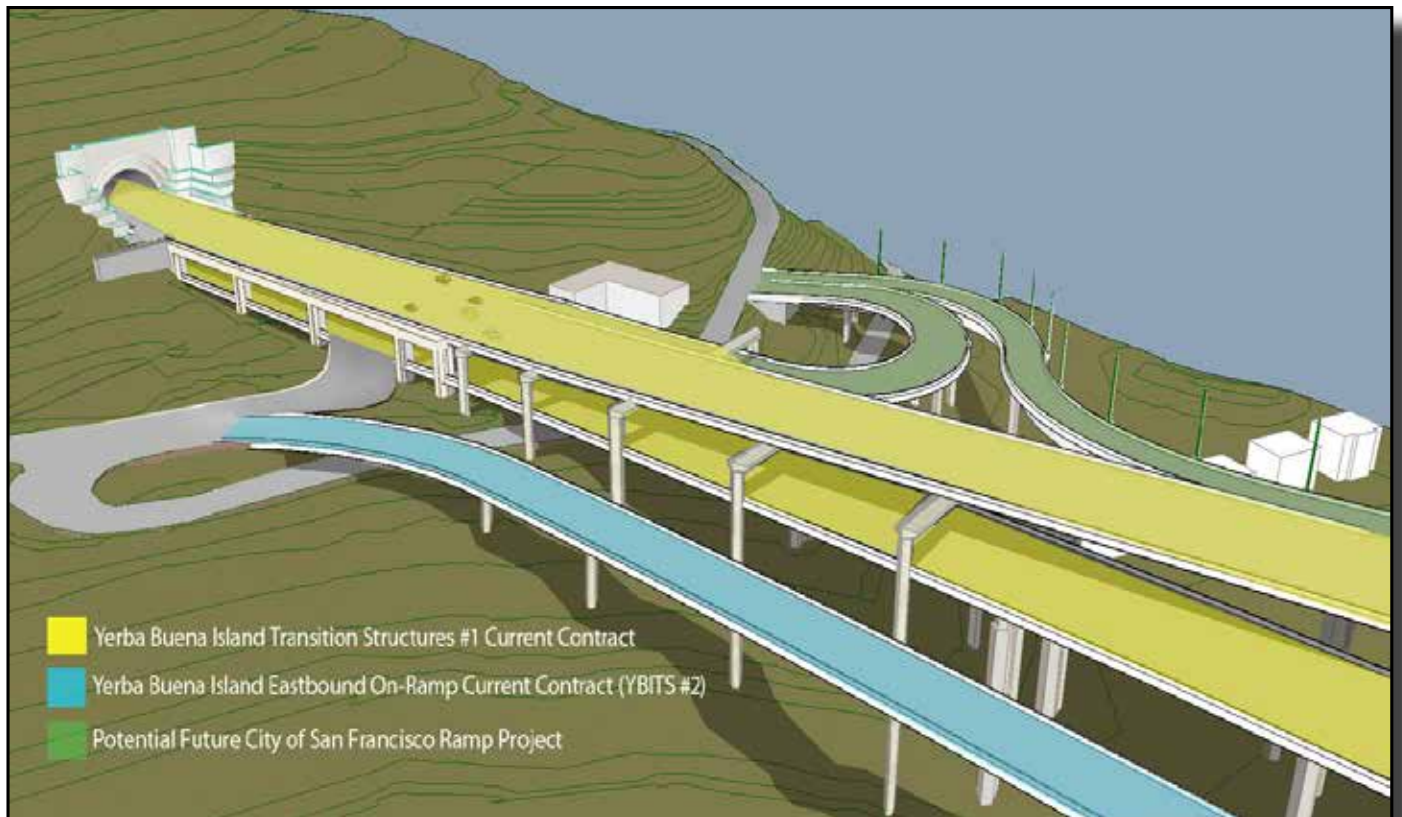
Upon completion of the YBITS #2 work, a follow-on landscaping contract will be executed to replant and landscape the area.







Aerial View of the San Francisco/Oakland Bay Bridge



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Self-Anchored Suspension (SAS) Bridge

If one single element bestows world class status on the new Bay Bridge East Span, it is the Self-Anchored Suspension (SAS) bridge. This engineering marvel will be the world's largest SAS span at 2,047 feet in length, as well as the first bridge of its kind built with a single tower.

The SAS was separated into three separate contracts - construction of the land-based foundations and columns at pier W2; construction of the marine-based foundations and columns at piers T1 and E2; and construction of the SAS steel superstructure, including the tower, roadway and cabling. Construction of the foundations at pier W2 and at piers T1 and E2 was completed in 2004 and 2007, respectively.

#### SAS Land Foundation Contract

Contractor: West Bay Builders, Inc.  
Approved Capital Outlay Budget: \$26.5 M  
Status: Completed October 2004

The twin W2 columns on Yerba Buena Island provide essential support for the western end of the SAS bridge, where the single main cable for the suspension span will extend down from the tower and wrap around and under the western end of the roadway deck. Each of these huge columns required massive amounts of concrete and steel and are anchored 80 feet into the island's solid bedrock.



SAS Marine E2 Foundation and the Skyway Westbound Column

#### C SAS Marine Foundations Contract

Contractor: Kiewit/FCI/Manson, Joint Venture  
Approved Capital Outlay Budget: \$274.8 M  
Status: Completed January 2008

Construction of the piers at E2 and T1 (see rendering on facing page) required significant on-water resources to drive the foundation support piles down, not only to bedrock, but also through the bay water and mud.

The T1 foundation piles extend 196 feet below the waterline and are anchored into bedrock with heavily reinforced concrete rock sockets that are drilled into the rock. Driven nearly 340 feet deep, the steel and concrete E2 foundation piles were driven 100 feet deeper than the deepest timber piles of the existing east span in order to get through the bay mud and reach solid bedrock.



## D SAS Superstructure Contract

Contractor: American Bridge/Fluor Enterprises, Joint Venture

Approved Capital Outlay Budget: \$2.05 B

Status: 88% Complete as of October 2012

The SAS bridge is not just another suspension bridge. Rising 525 feet above mean sea level and embedded in bedrock, the single-tower SAS span is designed to withstand a massive earthquake. Traditional main cable suspension bridges have twin cables with smaller suspender cables connected to them. While there will appear to be two main cables on the SAS, it is actually a single continuous cable. This single cable will be anchored within the eastern end of the roadway, carried over the tower and then wrapped around the two side-by-side decks at the western end.

The single-steel tower is made up of four separate legs connected by shear link beams, which function much like a fuse in an electrical circuit. These beams will absorb most of the impact from an earthquake, preventing damage to the tower legs.

Load transfer began on September 4, 2012, and was completed on October 8, 2012. Two hundred steel wire suspender ropes attached to 100 cable bands along the single main cable did the heavy lifting during load transfer. Sets of suspender ropes were gradually tensioned using hydraulic jacks. As each cable band carries two ropes, there are four hydraulic jacks (each exerting as much as 400 tons of force) at each corresponding location along the outside of the road decks tensioning and pulling the ropes into position. Following load transfer, remaining critical activities include wrapping of the main cable, painting, paving, striping, and installing and testing of the bridge's mechanical, electrical, and plumbing systems. The TBPOC's goal is to open the bridge to traffic in both directions by September 2013.



Architectural Rendering of New Self-Anchored Suspension Span and Skyway



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Self-Anchored Suspension (SAS) Construction Sequence

#### STEP 1 - CONSTRUCT TEMPORARY SUPPORT STRUCTURES

All temporary support foundations and structures were completed between the Skyway and Yerba Buena Island by September 2010 to support the westbound and eastbound roadway box erections.

**Status:** Removal of the westbound and eastbound temporary support structures (cradles) started on October 24, 2012, and is ongoing.



#### STEP 2 - INSTALL ROADWAYS

All of the 28 steel roadway boxes and 17 crossbeams have been erected as of the end of October 2011.

**Status:** Roadway deck interior field painting and weld repair work for lifts 13 east and west and drop-in pieces lifts 12 east and west corner assemblies are ongoing. Mechanical, electrical and piping installation continues. Installation of Hinge A falsework started on October 10, 2012, and continues with alignment of E2 bearings and shear keys Eastbound Hinge K falsework installation started on October 11, 2012, and continues with soffit rebar installation.



#### STEP 3 - INSTALL TOWER

All tower legs, tower grillage, tower saddle and tower head were erected using the self-rising crane as of mid-August 2012.

**Status:** Final tower base shear-plate welding NDT and completion continues. Tower lift four and five exterior painting continues.



#### STEP 4 - MAIN CABLE AND SUSPENDER INSTALLATION

The main cable haul started in late December 2011 from the east end of the westbound roadway deck moving over the tower saddle, wrapping around pier W2 west deviation saddles and returning to the tower saddle to the east end of eastbound roadway deck where it was anchored. The cable band and suspender cables were then installed to lift the roadway deck off the temporary support structure.

**Status:** The suspender installation started in late May 2012 and was completed in August 2012. Load transfer began on September 4, 2012, and phase three was completed on October 8. Cable wrapping started on the back span and main span on October 19 and is ongoing. Tensioning of the suspender ropes and installation of the suspender collars began on October 30 and will be complete in November 2012. Cleaning and painting of the upper suspenders began in mid October and will continue into early next year.



#### STEP 5 - WESTBOUND AND EASTBOUND SEISMIC SAFETY OPENING

The new bridge will now open simultaneously in both the westbound and eastbound directions on Labor Day, September 2, 2013.

**Status:** The SAS, YBITS#2 and OTD#2 construction activities are ongoing in support of the seismic safety opening scheduled for September 2013.

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

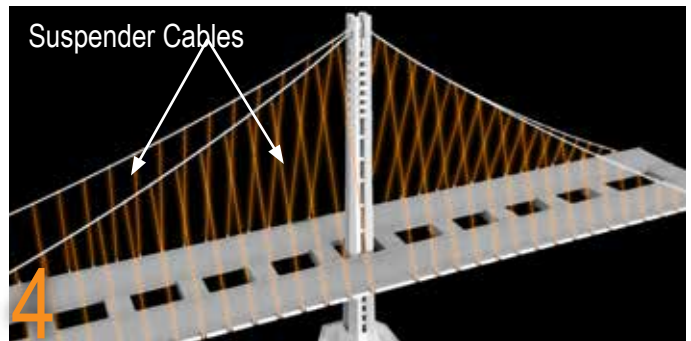
### Self-Anchored Suspension (SAS) Superstructure Main Cable Completion Activities



#### 1 CABLE STRAND HAULING

Crews haul the 137 individual steel wire strands that comprise the nearly 1-mile long single main cable. The strands are adjusted and then anchored into the east end of the SAS.

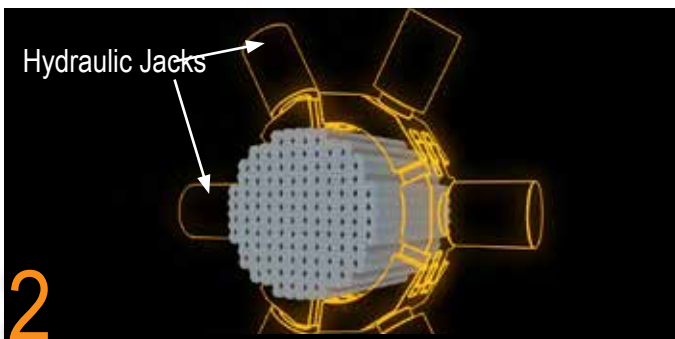
**Status: Complete**



#### 4 SUSPENDER CABLES INSTALLATION

Workers begin placing the suspender cables that connect the main cable to the road-decks. Not all of the suspender cables need to be attached before load transfer begins.

**Status: Complete**



#### 2 CABLE STRAND COMPACTING

Four compacting machines containing hydraulic jacks are used to compress the 137 steel wire strands into the shape of the main cable. Temporary bands are placed to maintain the shape.

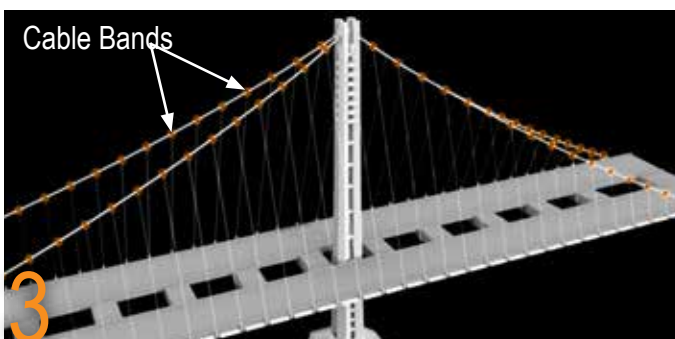
**Status: Complete**



#### 5 LOAD TRANSFER (see facing page)

Using the attached suspender cables, crews begin the process of transferring the weight of the span from the temporary supports under the bridge to the main cable.

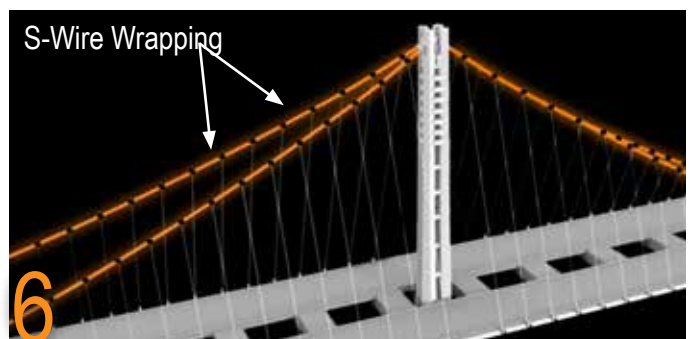
**Status: Complete**



#### 3 CABLE BANDS INSTALLATION

Crews installed 114 permanent steel cable bands along the main cable. These bands maintain the shape of the cable, and serve as anchor points for the suspender cables.

**Status: Complete**



#### 6 S-WIRE WRAP

After load transfer, the main cable is wrapped in S-wire to protect the cable against corrosion. After the cable is wrapped, it is painted.

**Status: Started on 10/19/12 and is ongoing**



# Load Transfer Sequence

## Phase 1

Jack and tension 26 of 50 suspender groups each side – 8 at a time in 3 steps – 2 in the fourth step then final adjustments in steps 5 to 18. In the first 8 steps - 80% of the load will be transferred from the temporary truss to the cable.

Status: Complete

### Load Transfer Phase 1

## Phase 2

Jack and tension 3 more suspender groups out of 50 from each side to bring to a total of 29 of 50 each side.

Status: Complete

### Load Transfer Phase 2

## Phase 3

Jack and tension final 21 of 50 suspender groups each side to bring total suspenders tensioned to 50 out of 50 each side.

Status: Complete.

### Load Transfer Phase 3

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Skyway

The Skyway, which comprises much of the new East Span, will drastically change the appearance of the Bay Bridge. Replacing the gray steel that currently cages drivers, a graceful, elevated roadway supported by piers will provide sweeping views of the bay.

#### **E** Skyway Contract

**Contractor:** Kiewit/FCI/Manson, Joint Venture

**Approved Capital Outlay Budget:** \$1.24 B

**Status:** Completed April 2008

Extending for more than a mile across Oakland mudflats, the Skyway is the longest section of the East Span. It sits between the new Self-Anchored Suspension (SAS) span and the Oakland Touchdown. In addition to incorporating the latest seismic-safety technology, the side-by-side roadway decks of the Skyway feature shoulders and lane widths built to modern standards.

The Skyway's decks are composed of 452 pre-cast concrete segments (standing three stories high), containing approximately 200 million pounds of structural steel, 120 million pounds of reinforcing steel, 200 thousand linear feet of piling and about 450 thousand cubic yards of concrete. These are the largest segments

of their kind ever cast and were lifted into place by custom-made winches.

The Skyway marine foundation consists of 160 hollow steel pipe piles measuring eight feet in diameter and dispersed among 14 sets of piers. The 365-ton piles were driven more than 300 feet into the deep bay mud. The new East Span piles were battered or driven in at an angle, rather than vertically, to obtain maximum strength and resistance.

Designed specifically to move during a major earthquake, the Skyway features several state-of-the-art seismic safety innovations, including 60-foot-long hinge pipe beams. These beams will allow deck segments on the Skyway to move, enabling the deck to withstand greater motion and to absorb more earthquake energy.

**Status:** All light poles that have been fabricated are in the process of installation. All remaining light poles will be fabricated, delivered and installed by seismic safety opening.



Rendering of the New San Francisco/Oakland Bridge East Span



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Oakland Touchdown

When completed, the Oakland Touchdown (OTD) structures will connect Interstate 80 in Oakland to the side-by-side decks of the new East Span. For westbound drivers, the OTD will be their introduction to the graceful new East Span. For eastbound drivers from San Francisco, this section of the bridge will carry them from the Skyway to the East Bay, offering unobstructed views of the Oakland hills.

The OTD approach structures to the Skyway will be constructed in three phases. The first phase, constructed under the OTD #1 contract, built the new westbound approach structure. Due to physical constraints with the existing bridge, the OTD #1 contract was only able to construct a portion of the eastbound approach. To facilitate opening the bridge in both directions at the same time, the second phase of work, performed by the Oakland Detour contractor, included widening the upper deck of the Oakland end of the existing bridge to allow for a traffic shift to the north that removes the physical constraint to completing the eastbound structure. This phase was completed in April 2012. The third phase, to be constructed by a future OTD #2 contract, will complete the eastbound lanes and provide the traffic switch to the new structure in both directions, thus allowing the bridge to open simultaneously in both directions.

#### **F** Oakland Touchdown #1 Contract

Contractor: MCM Construction, Inc.

Approved Capital Outlay Budget: \$205.0 M

Status: Completed June 2010

The OTD #1 contract constructed the entire 1,000-foot-long westbound approach from the toll plaza to the Skyway. When open to traffic, the westbound approach structure will provide direct access to the westbound Skyway. In the eastbound direction, the contract constructed a portion of the eastbound structure and all of the eastbound foundations that are not in conflict with the existing bridge.

**Status:** MCM Construction, Inc. completed OTD #1 westbound and eastbound phase 1 on June 8, 2010.

#### **G** Oakland Touchdown #2 Contract

Contractor: Flatiron West, Inc.

Approved Capital Outlay Budget: \$62.0 M

Status: 25% Complete as of October 2012

Flatiron West, Inc. is the prime contractor constructing the Oakland Touchdown #2 contract that will complete the remaining portions of the Oakland Touchdown Approach structures from the existing toll plaza to the new span. The westbound structure and portions of the eastbound structure (not in conflict with the existing span) were constructed under the Oakland Touchdown #1 contract.

**Status:** The OTD #2 construction contract started on June 25, 2012. The contractor is working on the eastbound approach structure completing the abutment wall in August and started installing falsework and the soffit in October 2012. The contractor installed a temporary access trestle in September 2012, which allows access to the SAS from the Oakland side of the bridge. The mainline structure work is scheduled to be completed in early 2013. Following the bridge opening in September 2013, the contractor will complete landscaping of the area and construct the remaining portion of the permanent bicycle/pedestrian pathway by 2014.



Aerial View of the Eastbound Oakland Touchdown #2 Construction Progress





## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Existing East Span Bridge Demolition

#### I Existing SFOBB Dismantling Contracts

Approved Capital Outlay Budget: \$239.1 M

To expedite the opening of a new eastbound on ramp and the pedestrian/bicycle pathway from Yerba Buena Island to the SAS and to maximize contractor efficiencies, the TBPOC has decided to split the dismantling of the existing bridge into multiple contracts. The dismantling of the superstructure of the main cantilever section of the existing bridge has been incorporated into the YBITS #2 contract. The dismantling of the remaining portions of the bridge will likely be performed under separate superstructure (above water) removal and marine foundation (below water) contracts. These contracts are still in design and may change in scope over time.

**Status:** The cantilever portion of the demolition was advertised with the YBITS #2 contract on April 9, 2012, and bids were opened on October 23, 2012. The contract award is forecast for November 28, 2012. Initial construction start up is planned to begin in March 2013, with actual dismantling to begin after seismic safety opening in September 2013.



Dismantling Scope Included in the Future YBITS#2 Contract - YBI Detour E-1 column in center, Cantilever Bridge Deck at right







## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Other Contracts

A number of contracts needed to relocate utilities, clear areas of archeological artifacts and prepare areas for future work have already been completed. The last major contract will be the eventual demolition and removal of the existing bridge, which by that time will have served the Bay Area for nearly 80 years. Following is a status of some the other East Span contracts.

#### **J** Electrical Cable Relocation

Contractor: Manson Construction

Approved Capital Outlay Budget: \$9.6 M

Status: Completed January 2008

A submerged cable from Oakland that is close to where the new bridge will touch down supplies electrical power to Treasure Island. To avoid any possible damage to the cable during construction, two new replacement cables were run from Oakland to Treasure Island. The extra cable was funded by the Treasure Island Development Authority.



Archeological Investigations

#### Yerba Buena Island Substation

Contractor: West Bay Builders

Approved Capital Outlay Budget: \$11.3 M

Status: Completed May 2005

This contract relocated an electrical substation just east of the Yerba Buena Island Tunnel in preparation for the new East Span.



New YBI Electrical Substation



## Stormwater Treatment Measures

Contractor: Diablo Construction, Inc.  
 Approved Capital Outlay Budget: \$18.3 M  
 Status: Completed December 2008

The Stormwater Treatment Measures contract implemented a number of best practices for the management and treatment of stormwater runoff. Focused on the areas around and approaching the toll plaza, the contract added new drainage and built new bio-retention swales and other related constructs.



Stormwater Retention Basin

## East Span Interim Seismic Retrofit

Contractors: 1) California Engineering  
 2) Balfour Beatty  
 Approved Capital Outlay Budget: \$30.8 M  
 Status: Completed October 2000

After the 1989 Loma Prieta Earthquake, and before the final retrofit strategy was determined for the East Span, Caltrans completed an interim retrofit of the existing bridge to prevent a catastrophic collapse of the bridge should a similar earthquake occur before the East Span was completely replaced. The interim retrofit was performed under two separate contracts that lengthened pier seats, added some structural members, and strengthened areas of the bridge so they would be more resilient during an earthquake.



Existing East Span of the San Francisco-Oakland Bay Bridge

## Pile Installation Demonstration

Contractor: Manson and Dutra, Joint Venture  
 Approved Capital Outlay Budget: \$9.3 M  
 Status: Completed December 2000

While large-diameter battered piles are common in offshore drilling, the new East Span is one of the first bridges to use them in its foundations. To minimize project risks and build industry knowledge, a pile installation demonstration project was initiated to prove the efficacy of the proposed technology and methodology. The demonstration was highly successful and helped result in zero contract change orders or claims for pile driving on the project.



Battered Pile Installation Demonstration

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Dumbarton Bridge Seismic Retrofit Project

Contractor: Shimmick Construction Company, Inc.

Approved Capital Outlay Budget: \$92.7 M

Status: 89% Complete as of October 2012

The current Dumbarton Bridge was opened to traffic in 1982 linking the cities of Newark in Alameda County and East Palo Alto in San Mateo County. The 1.6-mile long bridge has six lanes (three in each direction) and an eight-foot-wide bicycle/pedestrian pathway. The bridge is a combination of three bridge types; reinforced concrete slab approaches supported on multiple pile extension columns, precast-prestressed concrete delta girders and steel box girders supported on reinforced concrete piers. The current retrofit strategy for the bridge includes superstructure and deck modifications and installation of isolation bearings.

**Status:** The main bridge structure between piers 16 through 31 is being raised approximately five inches in order for isolation bearings to be installed to separate the superstructure from the substructure during seismic events. In preparation, the bridge piers have been widened with reinforced concrete to accommodate the new bearings.

Along the reinforced concrete slab approaches, the bent caps have been extended and tied to new 48-inch diameter steel piles that have been installed to strengthen the bridge. Bent cap extensions along the east and west trestle approach are now complete.

Concrete has been placed and installation of jacking frames is complete at all of the 16 piers. The isolation bearing installation at piers 16 through 22 and pier 30 is complete, which totals 28 out of 96 bearings installed.

Work at the pumping plant is substantially complete. Fender rehabilitation work is ongoing at piers 23 and 24. Pier footing overlay concrete has been placed at piers 17 through 30.

Retrofitting of the existing piles at the Ravenswood pier and pier removal operation are ongoing. Removal of 15 out of 63 spans has been completed.

The Dumbarton Bridge was closed to traffic for the second time this year during Labor Day weekend. A full bridge closure was necessary in order for crews to replace the existing expansion joint on the eastern side of the bridge at Pier 31 with a state-of-the-art seismic joint. Seismic retrofit of hinge 21 and 25 is ongoing.



Dumbarton Bridge Piers



Dumbarton Bridge





Dumbarton Bridge Ravenswood Pier 1 Removal



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Other Completed Projects

In the 1990s, the State Legislature identified seven of the nine state-owned toll bridges for seismic retrofit. In addition to the San Francisco-Oakland Bay Bridge, these included the Benicia-Martinez, Carquinez, Richmond-San Rafael and San Mateo-Hayward bridges in the Bay Area, and the Vincent Thomas and Coronado bridges in Southern California. Other than the East Span of the Bay Bridge, the retrofits of all of the bridges have been completed as planned.

#### San Mateo-Hayward Bridge Seismic Retrofit Project

**Project Status: Completed 2000**

The San Mateo-Hayward Bridge seismic retrofit project focused on strengthening the high-rise portion of the span. The foundations of the bridge were significantly upgraded with additional piles.



High-Rise Section of San Mateo-Hayward Bridge

#### 1958 Carquinez Bridge Seismic Retrofit Project

**Project Status: Completed 2002**

The eastbound 1958 Carquinez Bridge was retrofitted in 2002 with additional reinforcement of the cantilever thru-truss structure.

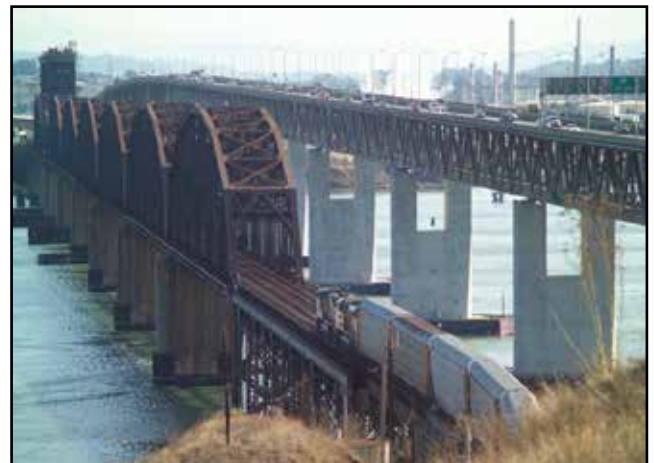


1958 Carquinez Bridge (foreground) with the 1927 Span (middle) under Demolition and the New Alfred Zampa Memorial Bridge (background)

#### 1962 Benicia-Martinez Bridge Seismic Retrofit Project

**Project Status: Completed 2003**

The southbound 1962 Benicia-Martinez Bridge was retrofitted to "Lifeline" status with the strengthening of the foundations and columns and the addition of seismic bearings that allow the bridge to move during a major seismic event. The Lifeline status means the bridge is designed to sustain minor to moderate damage after a seismic event and to reopen quickly to emergency response traffic.



1962 Benicia-Martinez Bridge (right)

## Richmond-San Rafael Bridge Seismic Retrofit Project

**Project Status: Completed 2005**

The Richmond-San Rafael Bridge was retrofitted to a “No Collapse” classification to avoid catastrophic failure during a major seismic event. The foundations, columns, and truss of the bridge were strengthened, and the entire low-rise approach viaduct from Marin County was replaced.



Richmond-San Rafael Bridge

## Los Angeles-Vincent Thomas Bridge Seismic Retrofit Project

**Project Status: Completed 2000**

The Vincent Thomas Bridge is a 1,500-foot long suspension bridge crossing the Los Angeles Harbor in Los Angeles that links San Pedro with Terminal Island. The bridge was one of two state-owned toll bridges in Southern California (the other being the San Diego-Coronado Bridge). Opened in 1963, the bridge was seismically retrofitted as part of the TBSRP in 2000.



Los Angeles-Vincent Thomas Bridge

## San Diego-Coronado Bridge Seismic Retrofit Project

**Project Status: Completed 2002**

The San Diego-Coronado Bridge crosses over San Diego Bay and links the cities of San Diego and Coronado. Opened in 1969, the 2.1-mile long bridge was seismically retrofitted as part of the TBSRP in 2002.



San Diego-Coronado Bridge

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Other Completed Projects

#### Antioch Bridge Seismic Retrofit Project

**Project Status: Completed 2012**

Serving the Delta region of the Bay Area, the Antioch Bridge takes State Route 160 traffic over the San Joaquin River, linking eastern Contra Costa County with Sacramento County. The current 1.8-mile-long steel plate girder bridge was opened in 1978 with one lane in each direction. The major retrofit measure for the bridge includes installing seismic isolation bearings at each of the 41 piers, strengthening piers 12 through 31 with steel cross-bracing between column bents, and installing steel casings at all columns located at the Sherman Island approach slab bridge.



Antioch Bridge





Antioch Bridge Support Column Seismic Retrofit



Aerial View of the Benicia-Martinez Bridge





## REGIONAL MEASURE 1 TOLL BRIDGE PROGRAM



## REGIONAL MEASURE 1 PROGRAM

### Completed Projects

In November 1988, Bay Area voters approved Regional Measure 1 (RM 1), which authorized a standard auto toll of \$1 for all seven state-owned Bay Area toll bridges. The additional revenues generated by the toll increase were identified for use for certain highway and bridge improvements, public transit rail extensions, and other projects that reduce congestion in the bridge corridors.

The toll bridge projects identified by RM 1 are complete and are as follows:

#### Richmond Parkway Construction Project

**Project Status: Completed 2001**

The final connections to the Richmond Parkway from Interstate 580 near the Richmond-San Rafael Bridge were completed in May 2001.

#### San Mateo-Hayward Bridge Widening Project

**Project Status: Completed 2003**

This project expanded the low-rise concrete trestle section of the San Mateo-Hayward Bridge to allow for three lanes in each direction to match the existing configuration of the high-rise steel section of the bridge.



Widening of the San Mateo-Hayward Bridge Trestle on Left

#### New Alfred Zampa Memorial (Carquinez) Bridge Project Project Status: Completed 2003

The new western span of the Carquinez Bridge, which replaced the original 1927 span, is a twin-towered suspension bridge with three mixed-flow lanes, a new carpool lane, shoulders and a bicycle/pedestrian pathway.



New Alfred Zampa Memorial (Carquinez) Bridge Soon after Opening to Traffic, with Crockett Interchange Still under Construction

#### Bayfront Expressway (State Route 84) Widening Project

**Project Status: Completed 2004**

This project expanded and improved the roadway from the Dumbarton Bridge touchdown to the US 101/ Marsh Road interchange by adding additional lanes and turn pockets and improving bicycle/pedestrian access in the area.

## Richmond-San Rafael Bridge Rehabilitation Projects

### Project Status: Completed 2006

Two major rehabilitation projects for the Richmond-San Rafael Bridge were funded and completed: (1) replacement of the western concrete approach trestle and ship-collision protection fender system; and (2) rehabilitation of deck joints and resurfacing of the bridge deck.

In 2005, along with the seismic retrofit of the bridge, the trestle and fender replacement work was completed as part of the same project. Under a separate contract in 2006, the bridge was resurfaced with a polyester concrete overlay along with the repair of numerous deck joints.



New Richmond-San Rafael Bridge West Approach Trestle under Construction

## Benicia-Martinez Bridge Project Project Status: Completed 2009

A two-year project to rehabilitate and reconfigure the original Benicia-Martinez Bridge began shortly after the opening of the new Congressman George Miller Bridge. The existing 1.2-mile roadway surface on the steel deck truss bridge was modified to carry four lanes of southbound traffic (one more than before) - with shoulders on both sides - plus a bicycle/pedestrian path on the west side of the span that connects to Park Road in Benicia and to Marina Vista Boulevard in Martinez. Reconstruction of the east side of the bridge and approaches was completed in August 2008. Reconstruction of the west side of the bridge and its approaches and construction of the bicycle/pedestrian pathway were completed in August 2009.



Benicia-Martinez Bridge

## Interstate 880/State Route 92 Project Status: Completed 2011

This corridor was consistently one of the Bay Area's most congested during the evening commute. This was due in part to the lane merging and weaving that was required by the then-existing cloverleaf interchange. The new interchange features direct freeway-to-freeway connector ramps that now increase traffic capacity and improve overall safety and traffic operations in the area. With the new direct-connector ramps, drivers coming off of the San Mateo-Hayward Bridge can access Interstate 880 without having to compete with traffic headed onto east Route 92 from south Interstate 880. A Caltrans landscaping project will be undertaken in 2012.



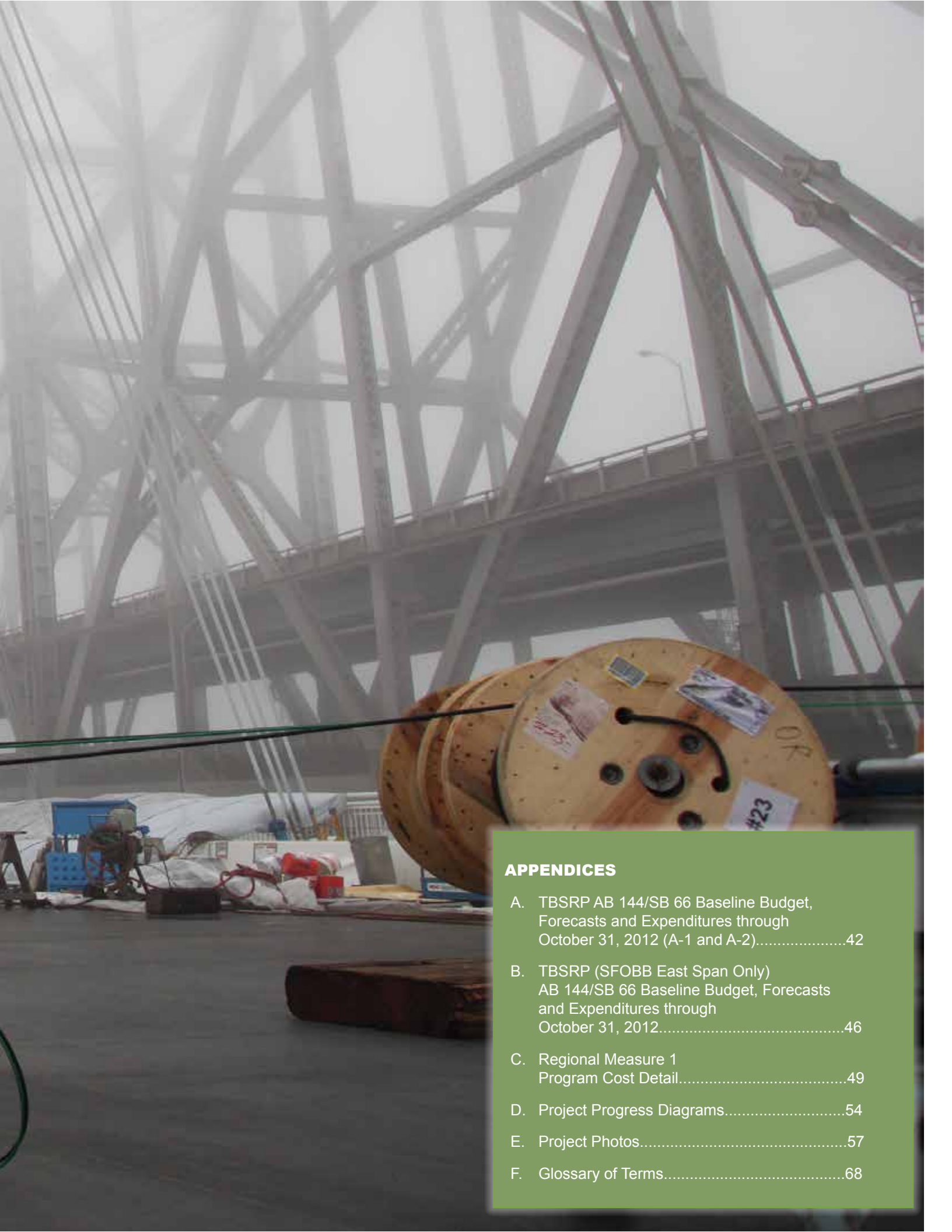
Aerial View of Completed 880/92 Interchange Project





Self-Anchored Suspension Bridge Installing Hand Rope on North Back Span Cable





## APPENDICES

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## Appendix A-1: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through October 31, 2012 (\$ Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (10/2012) e = c + d	Cost to Date (10/2012) f	Cost Forecast (10/2012) g	At- Completion Variance h = g - e
<b>SFOBB East Span Replacement Project</b>						
Capital Outlay Support	959.3	262.2	1,221.5	1,091.8	1,284.3	62.8
Capital Outlay Construction	4,492.2	542.1	5,034.3	4,248.5	5,093.1	58.8
Other Budgeted Capital	35.1	(3.3)	31.8	0.7	7.7	(24.1)
<b>Total</b>	<b>5,486.6</b>	<b>801.0</b>	<b>6,287.6</b>	<b>5,341.0</b>	<b>6,385.1</b>	<b>97.5</b>
<b>SFOBB West Approach Replacement</b>						
Capital Outlay Support	120.0	(1.0)	119.0	119.0	119.0	-
Capital Outlay Construction	309.0	41.7	350.7	331.7	338.1	(12.6)
<b>Total</b>	<b>429.0</b>	<b>40.7</b>	<b>469.7</b>	<b>450.7</b>	<b>457.1</b>	<b>(12.6)</b>
<b>SFOBB West Span Retrofit</b>						
Capital Outlay Support	75.0	(0.2)	74.8	74.9	74.8	-
Capital Outlay Construction	232.9	(5.5)	227.4	227.4	227.4	-
<b>Total</b>	<b>307.9</b>	<b>(5.7)</b>	<b>302.2</b>	<b>302.3</b>	<b>302.2</b>	<b>-</b>
<b>Richmond-San Rafael Bridge Retrofit</b>						
Capital Outlay Support	134.0	(7.0)	127.0	126.8	127.0	-
Capital Outlay Construction	780.0	(90.5)	689.5	667.5	689.5	-
<b>Total</b>	<b>914.0</b>	<b>(97.5)</b>	<b>816.5</b>	<b>794.3</b>	<b>816.5</b>	<b>-</b>
<b>Benicia-Martinez Bridge Retrofit</b>						
Capital Outlay Support	38.1	-	38.1	38.1	38.1	-
Capital Outlay Construction	139.7	-	139.7	139.7	139.7	-
<b>Total</b>	<b>177.8</b>	<b>-</b>	<b>177.8</b>	<b>177.8</b>	<b>177.8</b>	<b>-</b>
<b>Carquinez Bridge Retrofit</b>						
Capital Outlay Support	28.7	0.1	28.8	28.8	28.8	-
Capital Outlay Construction	85.5	(0.1)	85.4	85.4	85.4	-
<b>Total</b>	<b>114.2</b>	<b>-</b>	<b>114.2</b>	<b>114.2</b>	<b>114.2</b>	<b>-</b>
<b>San Mateo-Hayward Retrofit</b>						
Capital Outlay Support	28.1	-	28.1	28.1	28.1	-
Capital Outlay Construction	135.4	(0.1)	135.3	135.3	135.3	-
<b>Total</b>	<b>163.5</b>	<b>(0.1)</b>	<b>163.4</b>	<b>163.4</b>	<b>163.4</b>	<b>-</b>
<b>Vincent Thomas Bridge Retrofit (Los Angeles)</b>						
Capital Outlay Support	16.4	-	16.4	16.4	16.4	-
Capital Outlay Construction	42.1	(0.1)	42.0	42.0	42.0	-
<b>Total</b>	<b>58.5</b>	<b>(0.1)</b>	<b>58.4</b>	<b>58.4</b>	<b>58.4</b>	<b>-</b>
<b>San Diego-Coronado Bridge Retrofit</b>						
Capital Outlay Support	33.5	(0.3)	33.2	33.2	33.2	-
Capital Outlay Construction	70.0	(0.6)	69.4	69.4	69.4	-
<b>Total</b>	<b>103.5</b>	<b>(0.9)</b>	<b>102.6</b>	<b>102.6</b>	<b>102.6</b>	<b>-</b>

## Appendix A-1: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through October 31, 2012 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (10/2012)	Cost to Date (10/2012)	Cost Forecast (10/2012)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>Antioch Bridge</b>						
Capital Outlay Support	-	31.0	31.0	17.2	24.5	(6.5)
Capital Outlay Support by BATA				6.2		
Capital Outlay Construction	-	51.0	51.0	47.0	50.3	(0.7)
Total	-	82.0	82.0	70.4	74.8	(7.2)
<b>Dumbarton Bridge</b>						
Capital Outlay Support	-	56.0	56.0	33.7	56.0	-
Capital Outlay Support by BATA				6.0		
Capital Outlay Construction	-	92.7	92.7	55.5	71.9	(20.8)
Total	-	148.7	148.7	95.2	127.9	(20.8)
Subtotal Capital Outlay Support	1,433.1	340.8	1,773.9	1,620.2	1,830.2	56.3
Subtotal Capital Outlay	6,286.8	630.6	6,917.4	6,049.4	6,942.1	24.7
Subtotal Other Budgeted Capital	35.1	(3.3)	31.8	0.7	7.7	(24.1)
Miscellaneous Program Costs	30.0	-	30.0	25.5	30.0	-
Subtotal Toll Bridge Seismic Retrofit Program	7,785.0	968.1	8,753.1	7,695.8	8,810.0	56.9
Net Programmatic Risks*	-	-	-	-	87.1	87.1
Program Contingency	900.0	(571.1)	328.9	-	184.9	(144.0)
Total Toll Bridge Seismic Retrofit Program <sup>1</sup>	8,685.0	397.0	9,082.0	7,695.8	9,082.0	-

<sup>1</sup> Figures may not sum up to totals due to rounding effects.



## Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through October 31, 2012 (\$ Millions)

Bridge	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and encumbrances as of 10/2012 see Note (1)	Estimated costs not yet spent or encumbered as of 10/2012	Total Forecast as of 10/2012
a	b	c	d	e	f = d + e
<b>Other Completed Projects</b>					
Capital Outlay Support	144.9	144.6	144.6	-	144.6
Capital Outlay	472.6	471.9	472.8	(1.1)	471.7
<b>Total</b>	<b>617.5</b>	<b>616.5</b>	<b>617.4</b>	<b>(1.1)</b>	<b>616.3</b>
<b>Richmond-San Rafael</b>					
Capital Outlay Support	134.0	127.0	126.8	0.2	127.0
Capital Outlay	698.0	689.5	667.5	22.0	689.5
Project Reserves	82.0	-	-	-	-
<b>Total</b>	<b>914.0</b>	<b>816.5</b>	<b>794.3</b>	<b>22.2</b>	<b>816.5</b>
<b>West Span Retrofit</b>					
Capital Outlay Support	75.0	74.8	74.9	(0.1)	74.8
Capital Outlay	232.9	227.4	232.9	(5.5)	227.4
<b>Total</b>	<b>307.9</b>	<b>302.2</b>	<b>307.8</b>	<b>(5.6)</b>	<b>302.2</b>
<b>West Approach</b>					
Capital Outlay Support	120.0	119.0	119.1	(0.1)	119.0
Capital Outlay	309.0	350.7	346.4	(8.3)	338.1
<b>Total</b>	<b>429.0</b>	<b>469.7</b>	<b>465.5</b>	<b>(8.4)</b>	<b>457.1</b>
<b>SFOBB East Span - Skyway</b>					
Capital Outlay Support	197.0	181.2	181.2	-	181.2
Capital Outlay	1,293.0	1,237.2	1,237.2	-	1,237.2
<b>Total</b>	<b>1,490.0</b>	<b>1,418.4</b>	<b>1,418.4</b>	<b>-</b>	<b>1,418.4</b>
<b>SFOBB East Span - SAS - Superstructure</b>					
Capital Outlay Support	214.6	419.0	414.5	62.3	476.8
Capital Outlay	1,753.7	2,046.8	1,726.9	320.3	2,047.2
<b>Total</b>	<b>1,968.3</b>	<b>2,465.8</b>	<b>2,141.4</b>	<b>382.6</b>	<b>2,524.0</b>
<b>SFOBB East Span - SAS - Foundations</b>					
Capital Outlay Support	62.5	37.6	37.6	-	37.6
Capital Outlay	339.9	301.3	309.3	(4.2)	305.1
<b>Total</b>	<b>402.4</b>	<b>338.9</b>	<b>346.9</b>	<b>(4.2)</b>	<b>342.7</b>
<b>Small YBI Projects</b>					
Capital Outlay Support	10.6	10.2	10.2	0.4	10.6
Capital Outlay	15.6	15.2	15.5	0.2	15.7
<b>Total</b>	<b>26.2</b>	<b>25.4</b>	<b>25.7</b>	<b>0.6</b>	<b>26.3</b>
<b>YBI Detour</b>					
Capital Outlay Support	29.5	87.7	87.8	(0.1)	87.7
Capital Outlay	131.9	466.1	492.9	(19.6)	473.3
<b>Total</b>	<b>161.4</b>	<b>553.8</b>	<b>580.7</b>	<b>(19.7)</b>	<b>561.0</b>
<b>YBI- Transition Structures</b>					
Capital Outlay Support	78.7	106.4	89.3	25.7	115.0
Capital Outlay	299.4	262.0	171.6	138.0	309.6
<b>Total</b>	<b>378.1</b>	<b>368.4</b>	<b>260.9</b>	<b>163.7</b>	<b>424.6</b>

## Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through October 31, 2012 (\$ Millions) Cont.

Contract	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and encumbrances as of 10/2012 see Note (1)	Estimated costs not yet spent or encumbered as of 10/2012	Total Forecast as of 10/2012
a	b	c	d	e	f = d + e
<b>Oakland Touchdown</b>					
Capital Outlay Support	74.4	112.9	99.0	25.1	124.1
Capital Outlay	283.8	327.6	250.7	75.9	326.6
<b>Total</b>	<b>358.2</b>	<b>440.5</b>	<b>349.7</b>	<b>101.0</b>	<b>450.7</b>
<b>East Span Other Small Projects</b>					
Capital Outlay Support	212.3	206.6	197.9	8.7	206.6
Capital Outlay	170.8	170.8	118.4	36.2	154.6
<b>Total</b>	<b>383.1</b>	<b>377.4</b>	<b>316.3</b>	<b>44.9</b>	<b>361.2</b>
<b>Existing Bridge Demolition</b>					
Capital Outlay Support	79.7	59.9	3.4	41.3	44.7
Capital Outlay	239.2	239.1	-	231.4	231.4
<b>Total</b>	<b>318.9</b>	<b>299.0</b>	<b>3.4</b>	<b>272.7</b>	<b>276.1</b>
<b>Antioch Bridge</b>					
Capital Outlay Support	-	31.0	17.3	1.1	18.4
Capital Outlay Support by BATA			6.1	-	6.1
Capital Outlay	-	51.0	47.4	2.9	50.3
<b>Total</b>	<b>-</b>	<b>82.0</b>	<b>70.8</b>	<b>4.0</b>	<b>74.8</b>
<b>Dumbarton Bridge</b>					
Capital Outlay Support	-	56.0	34.1	15.9	50.0
Capital Outlay Support by BATA			6.0	-	6.0
Capital Outlay	-	92.7	67.6	4.3	71.9
<b>Total</b>	<b>-</b>	<b>148.7</b>	<b>107.7</b>	<b>20.2</b>	<b>127.9</b>
Miscellaneous Program Costs	30.0	30.0	25.5	4.5	30.0
Total Capital Outlay Support	1,463.2	1,803.9	1,675.3	184.9	1,860.2
Total Capital Outlay	6,321.8	6,949.3	6,157.1	792.6	6,949.7
<b>Program Total <sup>1</sup></b>	<b>7,785.0</b>	<b>8,753.2</b>	<b>7,832.4</b>	<b>977.5</b>	<b>8,809.9</b>

(1). Funds allocated to project or contract for Capital Outlay and Support needs includes Capital Outlay Support total allocation for FY 06/07.

(2). BSA provided a distribution of program contingency in December 2004 based in Bechtel Infrastructure Corporation input.

This Column is subject to revision upon completion of Department's risk assessment update.

(3) Total Capital Outlay Support includes program indirect costs.

<sup>1</sup> Figures may not sum up to totals due to rounding effects.

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through October 31, 2012 (\$ Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (10/2012) e = c + d	Cost to Date (10/2012) f	Cost Forecast (10/2012) g	At- Completion Variance h = g - e
San Francisco-Oakland Bay Bridge East Span Replacement Project						
East Span - SAS Superstructure						
Capital Outlay Support	214.6	204.4	419.0	396.1	476.8	57.8
Capital Outlay Construction	1,753.7	293.1	2,046.8	1,725.0	2,047.2	0.4
Total	1,968.3	497.5	2,465.8	2,121.1	2,524.0	58.2
SAS W2 Foundations						
Capital Outlay Support	10.0	(0.8)	9.2	9.2	9.2	-
Capital Outlay Construction	26.4	0.1	26.5	26.5	26.5	-
Total	36.4	(0.7)	35.7	35.7	35.7	-
YBI South/South Detour						
Capital Outlay Support	29.4	58.3	87.7	87.8	87.7	-
Capital Outlay Construction	131.9	334.2	466.1	466.1	473.3	7.2
Total	161.3	392.5	553.8	553.9	561.0	7.2
East Span - Skyway						
Capital Outlay Support	197.0	(15.8)	181.2	181.2	181.2	-
Capital Outlay Construction	1,293.0	(55.8)	1,237.2	1,237.2	1,237.2	-
Total	1,490.0	(71.6)	1,418.4	1,418.4	1,418.4	-
East Span - SAS E2/T1 Foundations						
Capital Outlay Support	52.5	(24.1)	28.4	28.4	28.4	-
Capital Outlay Construction	313.5	(38.7)	274.8	274.8	278.6	3.8
Total	366.0	(62.8)	303.2	303.2	307.0	3.8
YBI Transition Structures (see notes below)						
Capital Outlay Support	78.7	27.7	106.4	82.0	115.0	8.6
Capital Outlay Construction	299.3	(37.3)	262.0	170.6	309.6	47.6
Total	378.0	(9.6)	368.4	252.6	424.6	56.2
* YBI- Transition Structures						
Capital Outlay Support			16.4	16.4	16.4	-
Capital Outlay Construction			-	-	-	-
Total			16.4	16.4	16.4	-
* YBI- Transition Structures Contract No. 1						
Capital Outlay Support			57.0	50.9	64.6	7.6
Capital Outlay Construction			199.7	170.6	225.8	26.1
Total			256.7	221.5	290.4	33.7
* YBI- Transition Structures Contract No. 2						
Capital Outlay Support			32.0	14.7	33.0	1.0
Capital Outlay Construction			59.0	-	80.5	21.5
Total			91.0	14.7	113.5	22.5
* YBI- Transition Structures Contract No. 3 Landscape						
Capital Outlay Support			1.0	-	1.0	-
Capital Outlay Construction			3.3	-	3.3	-
Total			4.3	-	4.3	-



## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through October 31, 2012 (\$ Millions) Cont.

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (10/2012) e = c + d	Cost to Date (10/2012) f	Cost Forecast (10/2012) g	At- Completion Variance h = g - e
<b>Oakland Touchdown (see notes below)</b>						
Capital Outlay Support	74.4	38.5	112.9	95.6	124.1	11.2
Capital Outlay Construction	283.8	43.8	327.6	216.3	326.6	(1.0)
<b>Total</b>	<b>358.2</b>	<b>82.3</b>	<b>440.5</b>	<b>311.9</b>	<b>450.7</b>	<b>10.2</b>
<b>* OTD Prior-to-Split Costs</b>						
Capital Outlay Support			21.7	20.0	21.7	-
Capital Outlay Construction			-	-	-	4.4
<b>Total</b>			<b>21.7</b>	<b>20.0</b>	<b>21.7</b>	<b>4.4</b>
<b>* OTD Submarine Cable(1)</b>						
Capital Outlay Support			0.9	0.9	0.9	-
Capital Outlay Construction			9.6	5.7	9.6	-
<b>Total</b>			<b>10.5</b>	<b>6.6</b>	<b>10.5</b>	<b>-</b>
<b>* OTD No. 1 (Westbound)</b>						
Capital Outlay Support			51.3	51.2	51.3	-
Capital Outlay Construction			205.0	203.0	203.3	(1.7)
<b>Total</b>			<b>256.3</b>	<b>254.2</b>	<b>254.6</b>	<b>(1.7)</b>
<b>* OTD No. 2 (Eastbound)</b>						
Capital Outlay Support			22.5	16.6	35.6	13.1
Capital Outlay Construction			62.0	7.5	60.5	(1.5)
<b>Total</b>			<b>84.5</b>	<b>24.1</b>	<b>96.1</b>	<b>11.6</b>
<b>* OTD Touchdown 2 Detour(2)</b>						
Capital Outlay Support			15.0	6.2	13.1	(1.9)
Capital Outlay Construction			51.0	-	48.8	(2.2)
<b>Total</b>			<b>66.0</b>	<b>6.2</b>	<b>61.9</b>	<b>(4.1)</b>
<b>* OTD Electrical Systems</b>						
Capital Outlay Support			1.5	0.8	1.5	-
Capital Outlay Construction			-	-	4.4	4.4
<b>Total</b>			<b>1.5</b>	<b>0.8</b>	<b>5.9</b>	<b>4.4</b>
<b>Existing Bridge Demolition</b>						
Capital Outlay Support	79.7	(19.8)	59.9	3.4	44.7	(15.2)
Capital Outlay Construction	239.2	(0.1)	239.1	-	231.4	(7.7)
<b>Total</b>	<b>318.9</b>	<b>(19.9)</b>	<b>299.0</b>	<b>3.4</b>	<b>276.1</b>	<b>(22.9)</b>
<b>* Cantilever Section</b>						
Capital Outlay Support			-	-	16.8	
Capital Outlay Construction			-	-	60.5	
<b>Total</b>			<b>-</b>	<b>-</b>	<b>77.3</b>	
<b>* 504/288 Sections</b>						
Capital Outlay Support			-	3.4	13.9	
Capital Outlay Construction			-	-	64.3	
<b>Total</b>			<b>-</b>	<b>3.4</b>	<b>78.2</b>	
<b>*Marine foundations</b>						
Capital Outlay Support			-	-	14.0	
Capital Outlay Construction			-	-	106.6	
<b>Total</b>			<b>-</b>	<b>-</b>	<b>120.6</b>	
<b>YBI/SAS Archeology</b>						
Capital Outlay Support	1.1	-	1.1	1.1	1.1	-
Capital Outlay Construction	1.1	-	1.1	1.1	1.1	-
<b>Total</b>	<b>2.2</b>	<b>-</b>	<b>2.2</b>	<b>2.2</b>	<b>2.2</b>	<b>-</b>

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through October 31, 2012 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (10/2012)	Cost to Date (10/2012)	Cost Forecast (10/2012)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
YBI - USCG Road Relocation						
Capital Outlay Support	3.0	(0.3)	2.7	2.7	3.0	0.3
Capital Outlay Construction	3.0	(0.2)	2.8	2.8	3.0	0.2
Total	6.0	(0.5)	5.5	5.5	6.0	0.5
YBI - Substation and Viaduct						
Capital Outlay Support	6.5	(0.1)	6.4	6.4	6.5	0.1
Capital Outlay Construction	11.6	(0.3)	11.3	11.3	11.6	0.3
Total	18.1	(0.4)	17.7	17.7	18.1	0.4
Oakland Geofill						
Capital Outlay Support	2.5	0.1	2.6	2.5	2.5	(0.1)
Capital Outlay Construction	8.2	-	8.2	8.2	8.2	-
Total	10.7	0.1	10.8	10.7	10.7	(0.1)
Pile Installation Demonstration Project						
Capital Outlay Support	1.8	-	1.8	1.8	1.8	-
Capital Outlay Construction	9.3	-	9.3	9.3	9.3	-
Total	11.1	-	11.1	11.1	11.1	-
Stormwater Treatment Measures						
Capital Outlay Support	6.0	2.2	8.2	8.2	8.2	-
Capital Outlay Construction	15.0	3.3	18.3	16.8	18.3	-
Total	21.0	5.5	26.5	25.0	26.5	-
Right-of-Way and Environmental Mitigation						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay & Right-of-Way	72.4	-	72.4	51.7	80.4	8.0
Total	72.4	-	72.4	51.7	80.4	8.0
Sunk Cost - Existing East Span Retrofit						
Capital Outlay Support	39.5	-	39.5	39.5	39.5	-
Capital Outlay Construction	30.8	-	30.8	30.8	30.8	-
Total	70.3	-	70.3	70.3	70.3	-
Other Capital Outlay Support						
Environmental Phase	97.7	-	97.7	97.8	97.7	-
Pre-Split Project Expenditures	44.9	-	44.9	44.9	44.9	-
Non-Project Specific Costs	20.0	(8.0)	12.0	3.2	12.0	-
Total	162.6	(8.0)	154.6	145.9	154.6	-
Subtotal Capital Outlay Support	959.3	262.2	1,221.5	1,091.8	1,284.3	62.8
Subtotal Capital Outlay Construction	4,492.2	542.1	5,034.3	4,248.5	5,093.1	58.8
Other Budgeted Capital	35.1	(3.3)	31.8	0.7	7.7	(24.1)
						-
Total SFOBB East Span Replacement Project	5,486.6	801.0	6,287.6	5,341.0	6,385.1	97.5

<sup>1</sup> Figures may not sum up to totals due to rounding effects.

## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions)

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (10/2012)	Cost to Date (10/2012)	Cost Forecast (10/2012)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>New Benicia-Martinez Bridge Project</b>						
<b>New Bridge</b>						
Capital Outlay Support						
BATA Funding	84.9	7.2	92.1	91.9	92.1	-
Non-BATA Funding	-	0.1	0.1	0.1	0.1	-
Subtotal	84.9	7.3	92.2	92.0	92.2	-
Capital Outlay Construction			-			-
BATA Funding	661.9	94.6	756.5	753.7	756.5	-
Non-BATA Funding	10.1	-	10.1	10.1	10.1	-
Subtotal	672.0	94.6	766.6	763.8	766.6	-
<b>Total</b>	<b>756.9</b>	<b>101.9</b>	<b>858.8</b>	<b>855.8</b>	<b>858.8</b>	<b>-</b>
<b>I-680/I-780 Interchange Reconstruction</b>						
Capital Outlay Support						
BATA Funding	24.9	5.2	30.1	30.1	30.1	-
Non-BATA Funding	1.4	5.2	6.6	6.3	6.6	-
Subtotal	26.3	10.4	36.7	36.4	36.7	-
Capital Outlay Construction						
BATA Funding	54.7	26.9	81.6	77.1	81.6	-
Non-BATA Funding	21.6	-	21.6	21.7	21.7	0.1
Subtotal	76.3	26.9	103.2	98.8	103.3	0.1
<b>Total</b>	<b>102.6</b>	<b>37.3</b>	<b>139.9</b>	<b>135.2</b>	<b>140.0</b>	<b>0.1</b>
<b>I-680/Marina Vista Interchange Reconstruction</b>						
Capital Outlay Support	18.3	1.9	20.2	20.2	20.2	-
Capital Outlay Construction	51.5	4.9	56.4	56.1	56.4	-
<b>Total</b>	<b>69.8</b>	<b>6.8</b>	<b>76.6</b>	<b>76.3</b>	<b>76.6</b>	<b>-</b>
<b>New Toll Plaza and Administration Building</b>						
Capital Outlay Support	11.9	3.8	15.7	15.7	15.7	-
Capital Outlay Construction	24.3	2.0	26.3	25.1	26.3	-
<b>Total</b>	<b>36.2</b>	<b>5.8</b>	<b>42.0</b>	<b>40.8</b>	<b>42.0</b>	<b>-</b>
<b>Existing Bridge &amp; Interchange Modifications</b>						
Capital Outlay Support						
BATA Funding	4.3	13.7	18.0	18.0	18.0	-
Non-BATA Funding	-	0.9	0.9	0.8	0.9	-
Subtotal	4.3	14.6	18.9	18.8	18.9	-
Capital Outlay Construction						
BATA Funding	17.2	32.8	50.0	37.2	50.0	-
Non-BATA Funding	-	9.5	9.5	-	9.5	-
Subtotal	17.2	42.3	59.5	37.2	59.5	-
<b>Total</b>	<b>21.5</b>	<b>56.9</b>	<b>78.4</b>	<b>56.0</b>	<b>78.4</b>	<b>-</b>
<b>Other Contracts</b>						
Capital Outlay Support	11.4	(0.9)	10.5	9.7	10.5	-
Capital Outlay Construction	20.3	3.3	23.6	18.6	23.6	-
Capital Outlay Right-of-Way	20.4	(0.1)	20.3	17.0	20.3	-
<b>Total</b>	<b>52.1</b>	<b>2.3</b>	<b>54.4</b>	<b>45.3</b>	<b>54.4</b>	<b>-</b>



## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (10/2012)	Cost to Date (10/2012)	Cost Forecast (10/2012)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
New Benicia-Martinez Bridge Project continued...						
Subtotal BATA Capital Outlay Support	155.7	30.9	186.6	185.6	186.6	-
Subtotal BATA Capital Outlay Construction	829.9	164.5	994.4	967.8	994.4	-
Subtotal Capital Outlay Right-of-Way	20.4	(0.1)	20.3	17.0	20.3	-
Subtotal Non-BATA Capital Outlay Support	1.4	6.2	7.6	7.2	7.6	-
Subtotal Non-BATA Capital Outlay Construction	31.7	9.5	41.2	31.8	41.3	0.1
Project Reserves	20.8	1.6	22.4	-	22.3	(0.1)
Total New Benicia-Martinez Bridge Project						
Notes:	1,059.9	212.6	1,272.5	1,209.4	1,272.5	-
	Includes EAs 00601_,00603_,00605_,00606_,00608_,00609_,0060A_,0060C_,0060E_,0060F_,0060G_,0060H_, and all Project Right-of-Way					
Carquinez Bridge Replacement Project						
New Bridge						
Capital Outlay Support	60.5	(0.3)	60.2	60.2	60.2	-
Capital Outlay Construction	253.3	2.7	256.0	255.9	256.0	-
Total	313.8	2.4	316.2	316.1	316.2	-
Crockett Interchange Reconstruction						
Capital Outlay Support	32.0	(0.1)	31.9	31.9	31.9	-
Capital Outlay Construction	73.9	(1.9)	72.0	71.9	72.0	-
Total	105.9	(2.0)	103.9	103.8	103.9	-
Existing 1927 Bridge Demolition						
Capital Outlay Support	16.1	(0.3)	15.8	15.8	15.8	-
Capital Outlay Construction	35.2	-	35.2	35.1	35.2	-
Total	51.3	(0.3)	51.0	50.9	51.0	-
Other Contracts						
Capital Outlay Support	15.8	0.9	16.7	16.5	16.7	-
Capital Outlay Construction	18.8	(1.2)	17.6	16.5	17.6	-
Capital Outlay Right-of-Way	10.5	(0.1)	10.4	9.9	10.4	-
Total	45.1	(0.4)	44.7	42.9	44.7	-
Subtotal BATA Capital Outlay Support						
Subtotal BATA Capital Outlay Construction	124.4	0.2	124.6	124.4	124.6	-
Subtotal Capital Outlay Right-of-Way	381.2	(0.4)	380.8	379.4	380.8	-
Project Reserves	10.5	(0.1)	10.4	9.9	10.4	-
	12.1	(9.7)	2.4	-	2.4	-
Total Carquinez Bridge Replacement Project <sup>1</sup>						
	528.2	(10.0)	518.2	513.7	518.2	-
Notes	Other Contracts include EAs 01301_,01302_,01303_,01304_,01305_,01306_,01307_,01308_,01309_,0130A_,0130C_,0130D_,0130F_,0130G_,0130H_,0130J_,00453_,00493_,04700_,00607_,2A270_,and 29920_ and all Project Right-of-Way					

<sup>1</sup> Figures may not sum up to totals due to rounding effects.

## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (10/2012)	Cost to Date (10/2012)	Cost Forecast (10/2012)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation</b>						
Capital Outlay Support						
BATA Funding	2.2	(0.8)	1.4	1.4	1.4	-
Non-BATA Funding	8.6	1.8	10.4	10.4	10.4	-
Subtotal	10.8	1.0	11.8	11.8	11.8	-
Capital Outlay Construction						
BATA Funding	40.2	(6.8)	33.4	33.3	33.4	-
Non-BATA Funding	51.1	-	51.1	51.1	51.1	-
Subtotal	91.3	(6.8)	84.5	84.4	84.5	-
Project Reserves	-	0.8	0.8	-	0.8	-
Total	102.1	(5.0)	97.1	96.2	97.1	-
<b>Richmond-San Rafael Bridge Deck Overlay Rehabilitation</b>						
Capital Outlay Support						
BATA Funding	4.0	(0.7)	3.3	3.3	3.3	-
Non-BATA Funding	4.0	(4.0)	-	-	-	-
Subtotal	8.0	(4.7)	3.3	3.3	3.3	-
Capital Outlay Construction	16.9	(0.6)	16.3	16.3	16.3	-
Project Reserves	0.1	0.3	0.4	-	0.4	-
Total	25.0	(5.0)	20.0	19.6	20.0	-
<b>Richmond Parkway Project (RM 1 Share Only)</b>						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay Construction	5.9	-	5.9	4.3	5.9	-
Total	5.9	-	5.9	4.3	5.9	-
<b>San Mateo-Hayward Bridge Widening</b>						
Capital Outlay Support	34.6	(0.5)	34.1	34.1	34.1	-
Capital Outlay Construction	180.2	(6.1)	174.1	174.1	174.1	-
Capital Outlay Right-of-Way	1.5	(0.9)	0.6	0.6	0.6	-
Project Reserves	1.5	(0.5)	1.0	-	1.0	-
Total	217.8	(8.0)	209.8	208.8	209.8	-
<b>I-880/SR-92 Interchange Reconstruction</b>						
Capital Outlay Support	28.8	35.8	64.6	62.2	64.6	-
Capital Outlay Construction						
BATA Funding	85.2	68.4	153.6	150.2	153.6	-
Non-BATA Funding	9.6	-	9.6	-	9.6	-
Subtotal	94.8	68.4	163.2	150.2	163.2	-
Capital Outlay Right-of-Way	9.9	7.3	17.2	14.7	17.2	-
Project Reserves	0.3	(0.3)	-	-	-	-
Total	133.8	111.2	245.0	227.1	245.0	-
<b>Bayfront Expressway Widening</b>						
Capital Outlay Support	8.6	(0.2)	8.4	8.4	8.4	-
Capital Outlay Construction	26.5	(1.5)	25.0	24.9	25.0	-
Capital Outlay Right-of-Way	0.2	-	0.2	0.2	0.2	-
Project Reserves	0.8	(0.3)	0.5	-	0.5	-
Total	36.1	(2.0)	34.1	33.5	34.1	-

## Appendix C: Regional Measure 1 Program Cost Detail (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (10/2012)	Cost to Date (10/2012)	Cost Forecast (10/2012)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
US 101/University Avenue Interchange Modification						
Capital Outlay Support	-	-	-	-	-	-
Capital Outlay Construction	3.8	-	3.8	3.7	3.8	-
Total	3.8	-	3.8	3.7	3.8	-
Subtotal BATA Capital Outlay Support	358.3	64.7	423.0	419.4	423.0	-
Subtotal BATA Capital Outlay Construction	1,569.8	217.5	1,787.3	1,754.0	1,787.3	-
Subtotal Capital Outlay Right-of-Way	42.5	6.2	48.7	42.4	48.7	-
Subtotal Non-BATA Capital Outlay Support	14.0	4.0	18.0	17.6	18.0	-
Subtotal Non-BATA Capital Outlay Construction	92.4	9.5	101.9	82.9	102.0	0.1
Project Reserves	35.6	(8.1)	27.5	-	27.4	(0.1)
Total RM1 Program	2,112.6	293.8	2,406.4	2,316.3	2,406.4	-
Notes:	1 Richmond-San Rafael Bridge Trestle, Fender, and Deck Joint Rehabilitation Includes Non-TBSRP Expenses for EA 0438U_ and 04157_					
	2 San Mateo-Hayward Bridge Widening includes EAs 00305_,04501_,04503_,04504_,04504_,04505_,04506_,04507_,04508_,04509_,27740_,27790_,04860_					

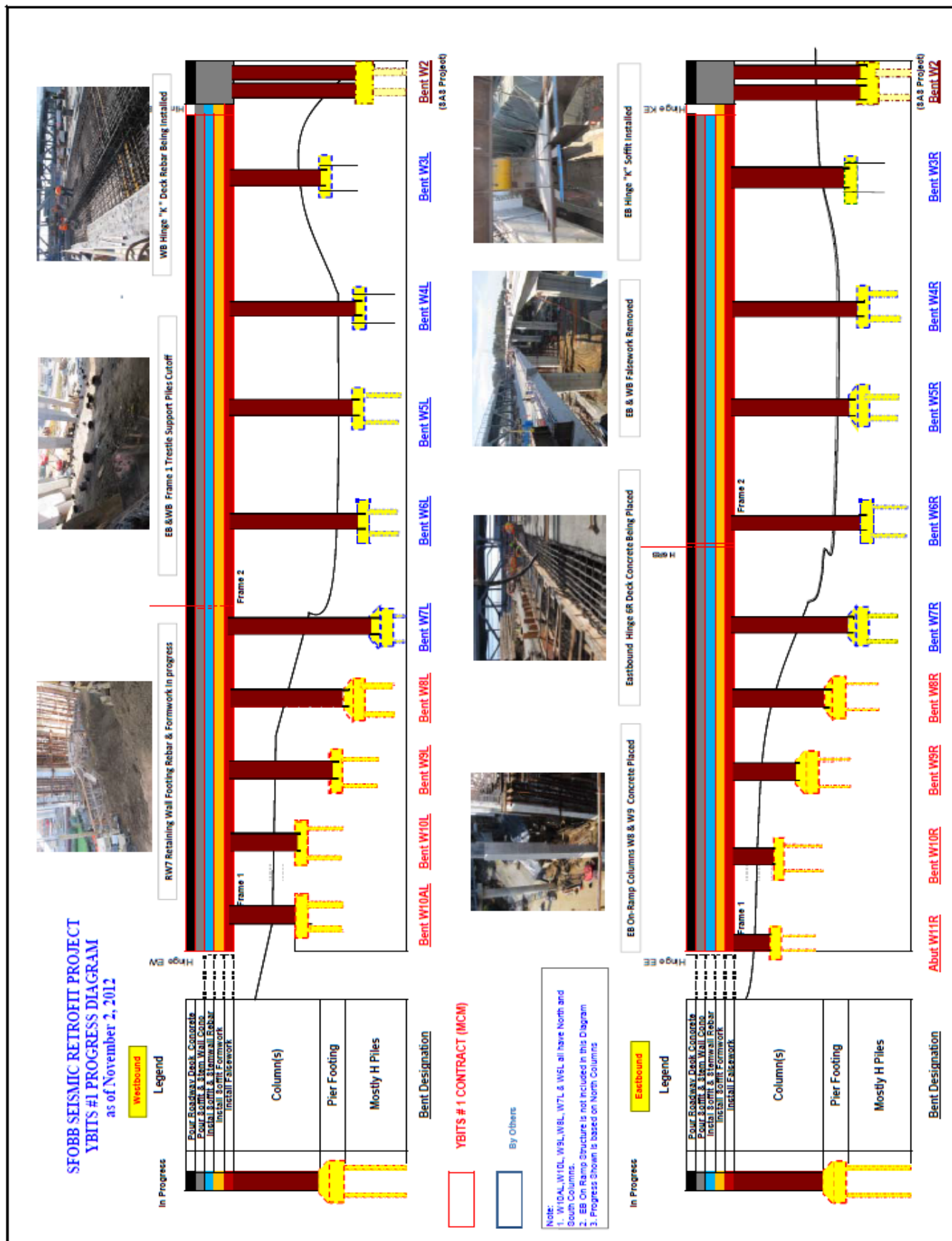




View from the Tower of the San Francisco-Oakland Self-Anchored Suspension Bridge - Cable Wire-Wrapping Installation on Backspan North Cable

## Appendix D: Progress Diagrams

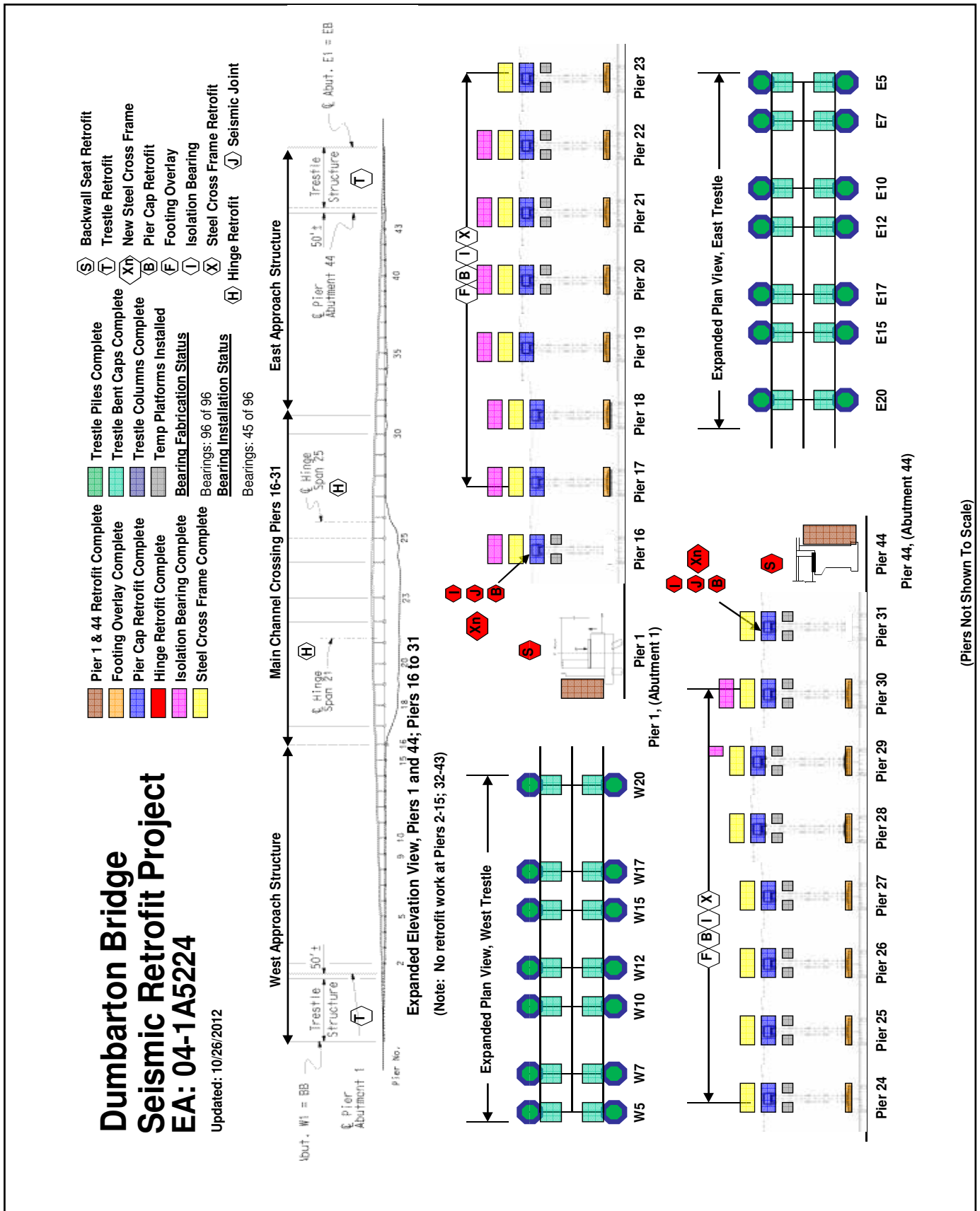
### Yerba Buena Island Transition Structures



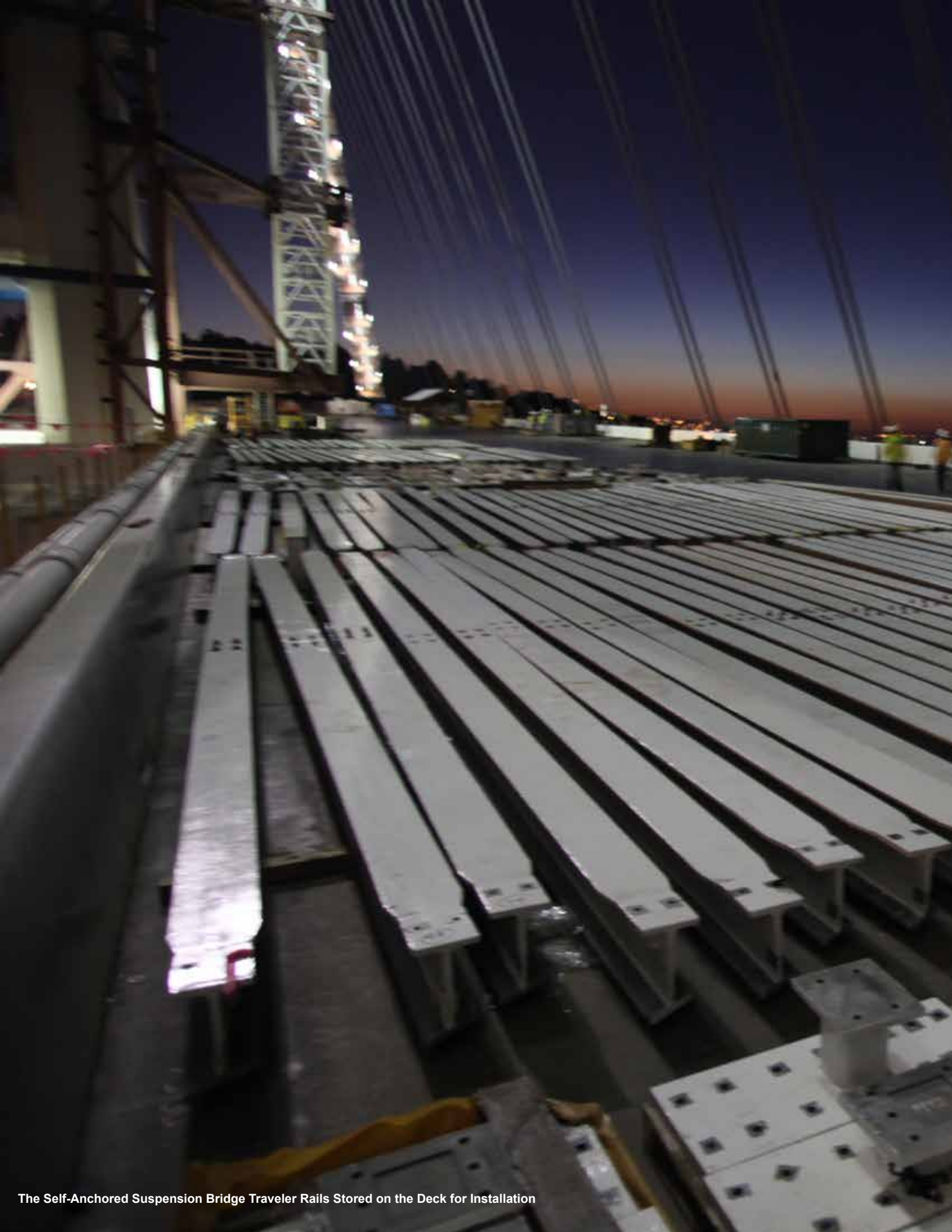


## Appendix D: Progress Diagrams (cont.)

### Dumbarton Bridge







The Self-Anchored Suspension Bridge Traveler Rails Stored on the Deck for Installation



**Project Photos**



## Appendix E: Project Progress Photographs

### Self-Anchored Suspension Bridge Field Work



Self-Anchored Suspension Bridge Inspector Checking the Bike Path Support Beam Installation

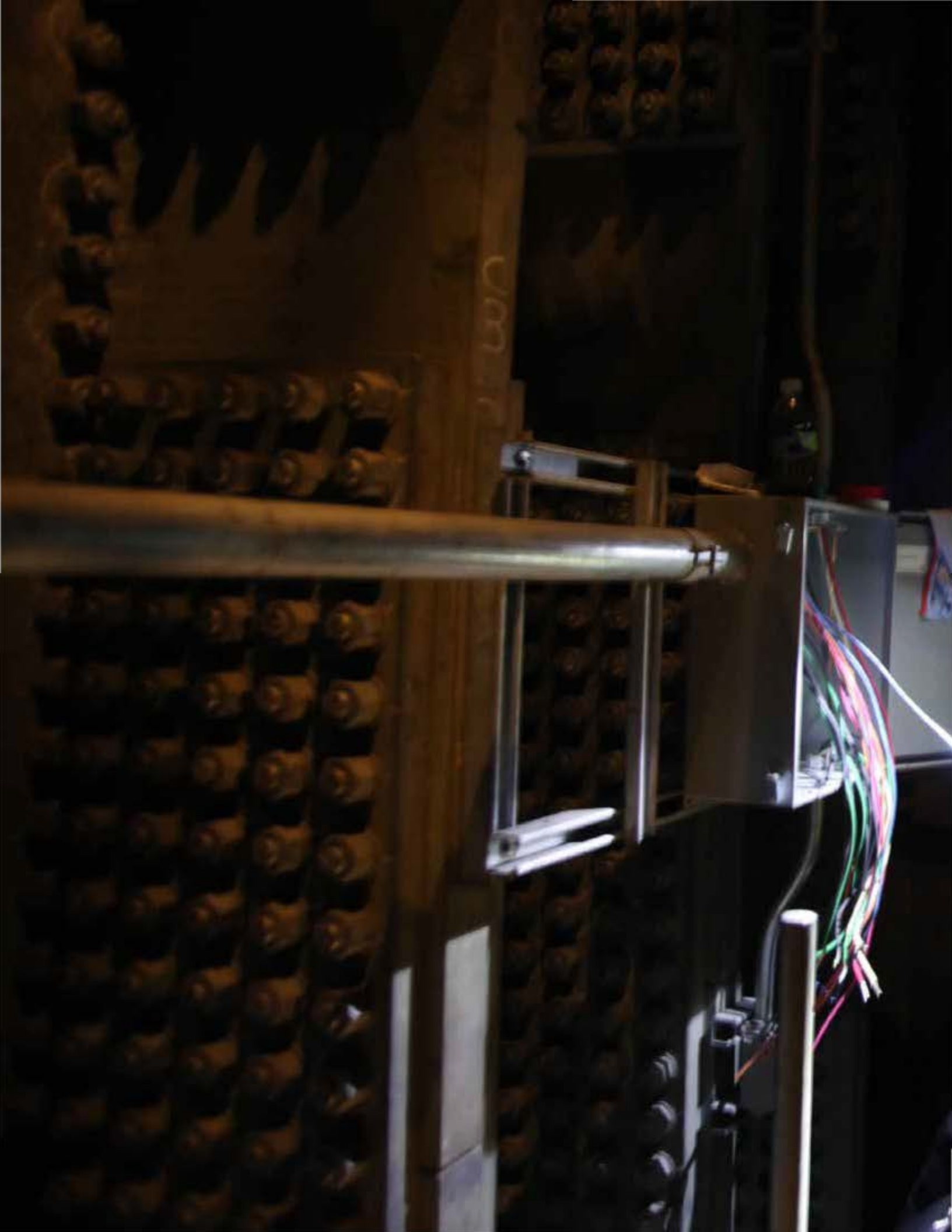


Self-Anchored Suspension Bridge Steam Cleaning Suspender Cables





Self-Anchored Suspension Bridge Painting Suspender Cables





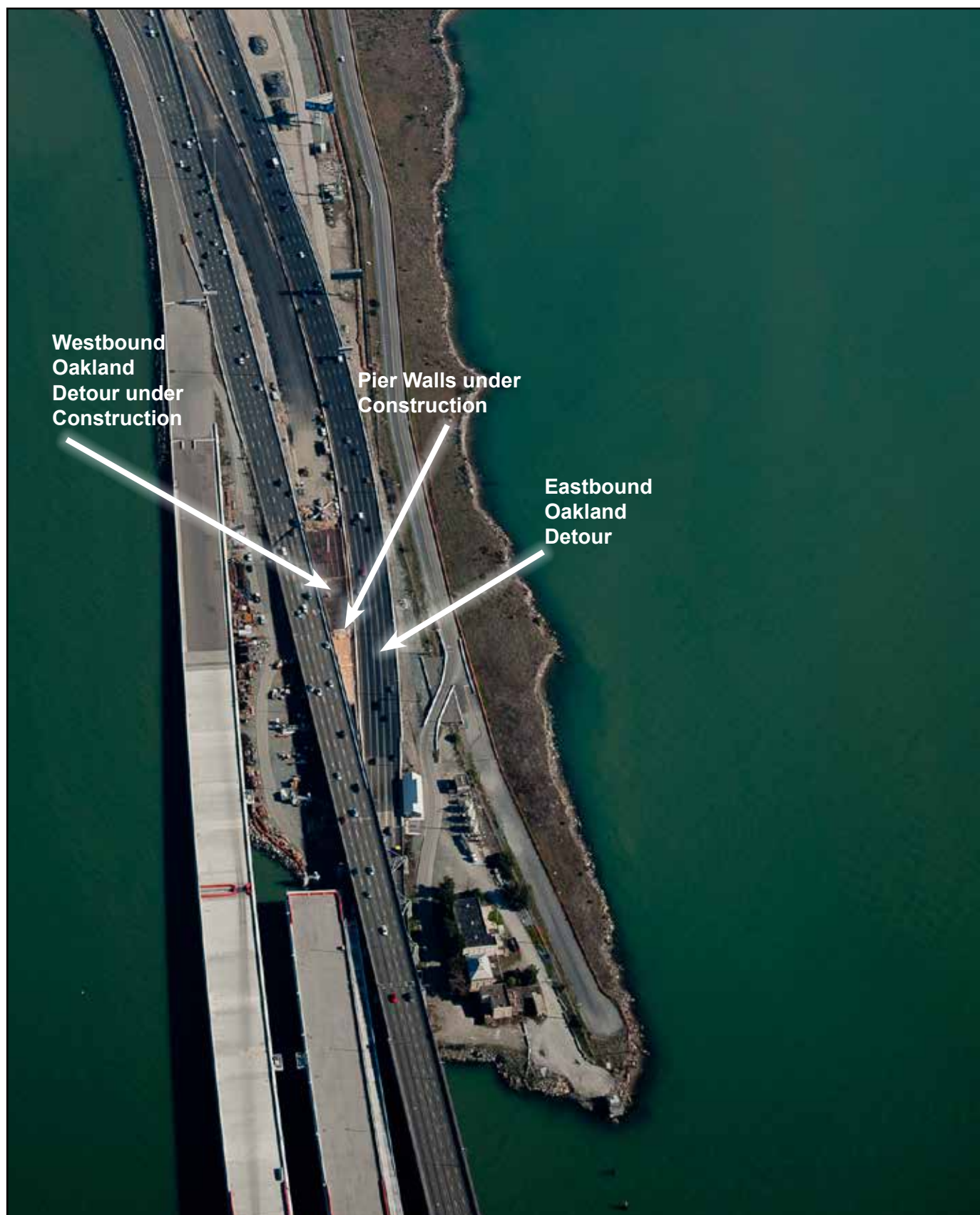
Self-Anchored Suspension Bridge Electrical Cable Installation



## Appendix E: Project Progress Photographs

### Westbound Oakland Detour

Before Opening to Traffic



## After Opening to Traffic





## Appendix E: Project Progress Photographs

### Yerba Buena Island Transition Structure #1 Westbound



YBITS #1 Retaining Wall #7 under Construction



YBITS #1 Eastbound Falsework Removed





YBITS #1 Westbound and Eastbound Completed Roadway Deck, YBID, SAS Tower and the Existing Eastbound Cantilever Structures.

## Appendix E: Project Progress Photographs

### Antioch Bridge



Antioch Bridge - Pier 41 Girders on Temporary Jacks prior to Installation of Isolation Bearings



Antioch Bridge - Welding of Jacking Stiffeners at Existing Girder Web



## Appendix E: Project Progress Photographs

### Dumbarton Bridge



Dumbarton Bridge - Ravenswood Pier Staging for Footing Overlay Work



Dumbarton Bridge - Pier 26 Footing Overlay - All Footing Overlay Completed Except Piers 23 & 24



## Appendix F: Glossary of Terms

# Glossary of Terms

**AB 144/SB 66 BUDGET:** The planned allocation of resources for the Toll Bridge Seismic Retrofit Program, or subordinate projects or contracts, as provided in Assembly Bill 144 and Senate Bill 66, signed into law by Governor Schwarzenegger on July 18, 2005 and September 29, 2005, respectively.

**AB 144/SB 66 PROJECT COMPLETE BASELINE:** The planned completion date for the Toll Bridge Seismic Retrofit Program or subordinate projects or contracts.

**APPROVED CHANGES:** For cost, changes to the AB 144/SB 66 Budget or BATA Budget as approved by the Bay Area Toll Authority Commission. For schedule, changes to the AB 144/SB 66 Project Complete Baseline approved by the Toll Bridge Program Oversight Committee, or changes to the BATA Project Complete Baseline approved by the Bay Area Toll Authority Commission.

**AT COMPLETION VARIANCE or VARIANCE (cost):** The mathematical difference between the Cost Forecast and the Current Approved Budget.

**BATA BUDGET:** The planned allocation of resources for the Regional Measure 1 Program, or subordinate projects or contracts as authorized by the Bay Area Toll Authority as of June 2005.

**BATA PROJECT COMPLETE BASELINE:** The planned completion date for the Regional Measure 1 Program or subordinate projects or contracts.

**COST FORECAST:** The current forecast of all of the costs that are projected to be expended so as to complete the given scope of the program, project, or contract.

**COST TO DATE:** The actual expenditures incurred by the program, project or contract as of the month and year shown.

**CURRENT APPROVED BUDGET:** The sum of the AB 144/SB 66 Budget or BATA Budget and Approved Changes.

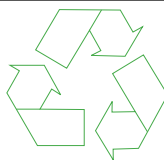
**HINGE PIPE BEAMS:** Pipes between roadway sections designed to move within their sleeves during expansion or contraction of the decks during minor events, such as changes in temperature. The beams are designed to absorb the energy of an earthquake by deforming in their middle or “fuse” section. Hinge pipe beams are also found at the western piers where the SAS connects to the YBITS (Hinge “K” pipe beams).

**PROJECT COMPLETE CURRENT APPROVED SCHEDULE:** The sum of the AB 144/SB 66 Project Complete Baseline or BATA Project Complete Baseline and Approved Changes.

**PROJECT COMPLETE SCHEDULE FORECAST:** The current projected date for the completion of the program, project, or contract.

**SCHEDULE VARIANCE or VARIANCE (schedule):** The mathematical difference expressed in months between the Project Complete Schedule Forecast and the Project Complete Current Approved Schedule.

**% COMPLETE:** % Complete is based on an evaluation of progress on the project, expenditures to date, and schedule.



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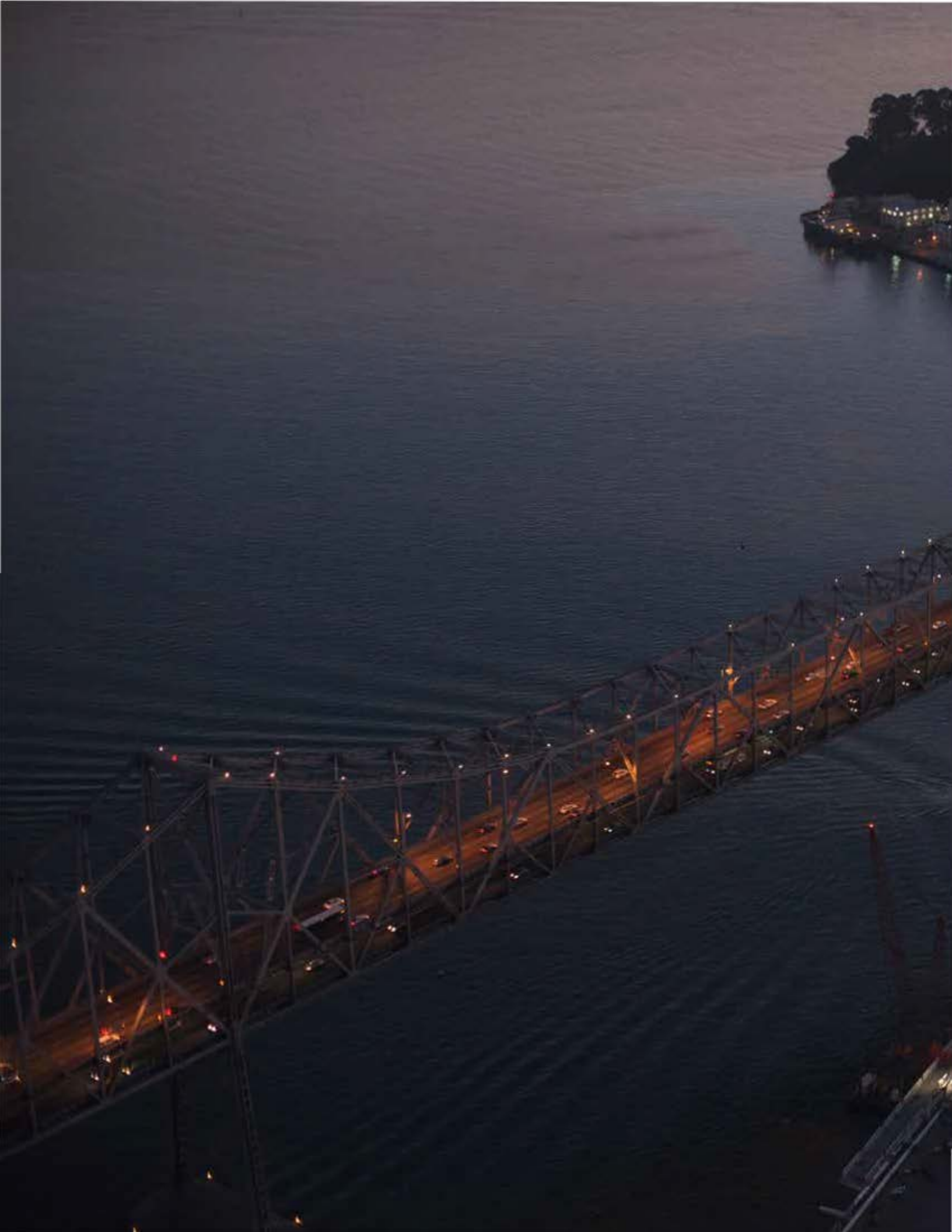
*The information in this report is provided in accordance with California Government code Section 755. This document is one of a series of reports prepared for the Bay Area Toll Authority (BATA)/Metropolitan Transportation Commission (MTC) for the Toll Bridge Seismic Retrofit and Regional Measure 1 Programs. The contract value for the monitoring efforts, technical analysis, and field site works that contribute to these reports, as well as the report preparation and production is \$1,574,873.73.*



The San Francisco-Oakland Bay Bridge Self-Anchored Suspension Bridge  
Hinge K Deck Rebar Installed









## *Memorandum*

**TO:** Toll Bridge Oversight Committee (TBPOC) **DATE:** December 5, 2012

**FR:** Stephen Maller, Deputy Director, CTC  
Andrew Fremier, Deputy Executive Director – Operations, MTC/BATA

**RE:** Agenda No. - 4a

Item – Program Issues  
Bay Bridge East Span Opening Update

---

**Recommendation:**

For Information Only

**Cost:**

See table (Overview of 1.5-Day Celebration Elements, Costs and Expected Attendance)

**Schedule Impacts:**

N/A

**Discussion:**

1. Staff from the TBPOC agencies, as well as Bay Bridge Alliance contractors, on Dec. 4 briefed Business, Transportation & Housing Secretary Brian Kelly, members of the Governor's staff, and CHP staff (including Golden Gate Division Chief Teresa Becher) about the 1.5-day Opening Celebration planned for the new Bay Bridge East Span. Secretary Kelly reiterated Gov. Brown's enthusiasm for a public opening and noted that in addition to the Governor's desire for a "simple and elegant" celebration, the event(s) also should be "accessible." Similar enthusiasm for the preliminary Opening Celebration plan was voiced by CHP District Chief Becher.

A follow-up meeting with Secretary Kelly, and staff from both the Governor's Office and CHP will be held on December 18 in Sacramento.

2. The Bay Bridge Alliance (BBA) and its fundraising team have had encouraging meetings with print and broadcast media partners. BBA is expected to finalize agreements with Hearst Media Services (San Francisco Chronicle and SF Gate) and with CBS Corp./KPIX-TV by mid-December. It is expected that the parties will issue a joint press release before Christmas, and that KPIX will seek to air a special East Span broadcast immediately following the CBS network's Super Bowl coverage on February 3, 2013.



## *Memorandum*

3. BATA staff is preparing to present on behalf of the TBPOC the request for \$5.6 million in toll funds to cover transportation, operations and public safety costs (TOPS) for the Opening Celebration at the January 9, 2013 meeting of the BATA Oversight Committee. Packets for the meeting will be distributed January 2, 2013. BATA Oversight Committee members likely will be alerted at the committee's December 12 meeting that an item will be coming to them in January 2013.
4. As requested by the TBPOC at its November 7 meeting, staff has updated the **Overview of 1.5-Day Celebration Elements, Costs and Expected Attendance** (*Attachment B to memo for Nov. 7 meeting*) to include other elements of the Opening Celebration, including upgrades to the interurban electric railway bridge yard shop (IERBYS)/ Sawtooth Building and a documentary film.

# Memorandum

	Transportation, Operations and Public Safety (TOPS) Costs*	Other Public Costs	Privately Funded Costs	Private Funds Pledged/Received to Date	Estimated Attendees
<u>Sawtooth Building Upgrades</u>		\$4,000,000	\$ 750,000	\$ 750,000	
<u>Documentary Film</u>			\$ 500,000	\$ 500,000	
<u>Chain-Cutting &amp; Opening Ceremony</u> Day 4, 3 pm to 5 pm (may start early as noon)	\$ 100,000		\$ 250,000		7,500
<u>Concert:</u> Day 4, 6 p.m. to 9 p.m.			\$ 2,500,000		25,000
<u>Fireworks Spectacular &amp; Bridge Lighting:</u> Day 4, 9 p.m. to 9:30 p.m.	\$ 850,000		\$ 3,400,000		500,000 (all sites)
<u>Bike the Bridge:</u> Day 5, 6 a.m. to 7 a.m.			\$ 438,000*		10,000
<u>Bridge Run Half Marathon:</u> Day 5, 7 a.m. to 8 a.m.			\$ 1,295,000*		30,000
<u>Westbound Bridge Walk</u> Day 5, 8 a.m. to 6:30 p.m.	\$ 3,539,000		\$ 1,475,000		155,000
<u>SUB TOTAL</u>	\$ 4,639,000	\$4,000,000	\$ 10,788,000		977,500 (202,500 on bridge)
<u>CONTINGENCY</u>	\$ 927,800		\$		
<u>TOTAL</u>	\$ 5,566,800	\$4,000,000	\$ 10,788,000	\$ 1,250,000	

\*Private funds for Bike the Bridge and Bridge Run generated through Bridge Run participation fee

5. As requested by the TBPOC at its November 7 meeting, Hartmann Studios has broken down the costs for the morning Bike the Bridge and Bridge Run events as follows:

<b>Total cost for Bridge Run alone</b>	<b>\$1.295 million</b>
<b>Total cost for Bike the Bridge alone</b>	<b>\$438,000</b>
<b>Combined cost for Bridge Run and Bike the Bridge</b>	<b>\$1.638 million</b>
<b>Net Savings achieved by Bridge Run absorbing Bike costs</b>	<b>\$95,000</b>

## *Memorandum*

6. As requested by the TBPOC at its November 7 meeting, Hartmann Studios has estimated the cost of providing transportation to Treasure Island from Oakland and San Francisco for people who are neither concert ticketholders nor Opening Ceremony participants/invitees, but who may wish to view the Bridge

Lighting/Fireworks Spectacular as follows:

<b>Production Costs for Event Area at Treasure Island</b>	<b>\$475,000</b>
<b>Build-Out/Operate Transfer Depot in San Francisco</b>	<b>\$206,000</b>
<b>Activate Transfer Depot in Oakland</b>	<b>\$90,000</b>
<b>Free Event Registration and Entry Management</b>	<b>\$50,000</b>
<b>Build-Out/Operate Additional Drop Zone on Treasure Island</b>	<b>\$29,000</b>
<b>Bus Transportation</b>	<b>\$272,000</b>
<b>Subtotal</b>	<b>\$1,122,000</b>
<b>Sales Tax</b>	<b>\$46,500</b>
<b>GRAND TOTAL</b>	<b>\$1,168,500</b>

These estimates assume 10,000 to 15,000 attendees, with half arriving from Oakland and half from San Francisco. Estimates include both direct transportation costs and additional operations and public safety costs (restrooms, waste management/recycling, crowd containment, security, etc.), and are **not included** in the Event Proposal approved by the TBPOC at its Nov. 7 meeting.

**Attachment(s):**

N/A



## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** December 5, 2012

**FR:** Tony Anziano, Toll Bridge Program Manager, CT

**RE:** Agenda No. - 4b  
Program Issues  
Item- Senate Hearing Update

---

**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

A verbal update on the SAS Senate hearing of November 28 will be provided at the TBPOC December 13 meeting.

**Attachment(s):**

N/A

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** December 5, 2012

**FR:** Tony Anziano – Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 5a  
San Francisco-Oakland Bay Bridge Updates  
Item- Corridor Update / Schedule

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**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

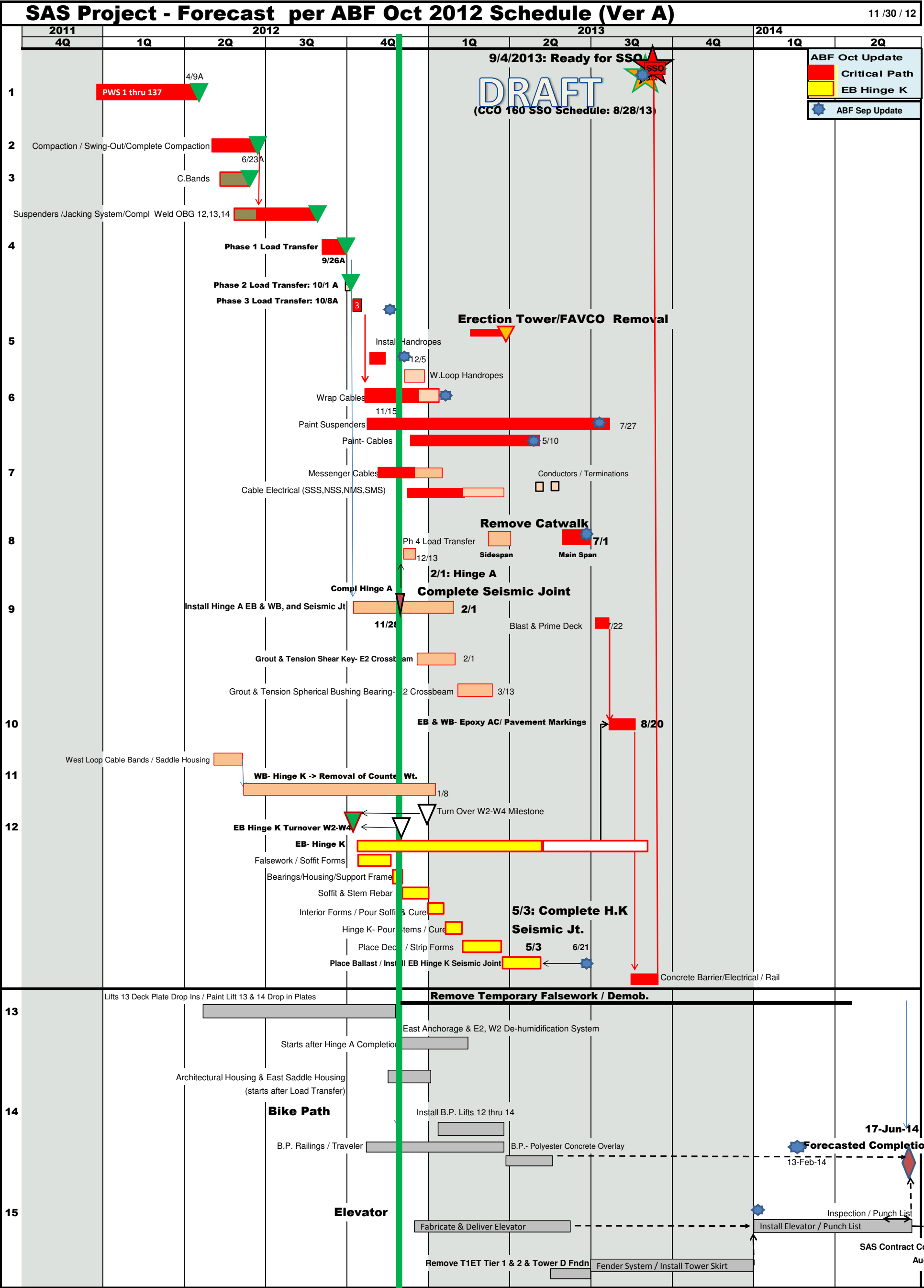
**Discussion:**

A verbal corridor update will be provided at the TBPOC meeting on December 13, 2012.

Attached are summary schedules for reference and further discussion at the meeting.

**Attachment(s):**

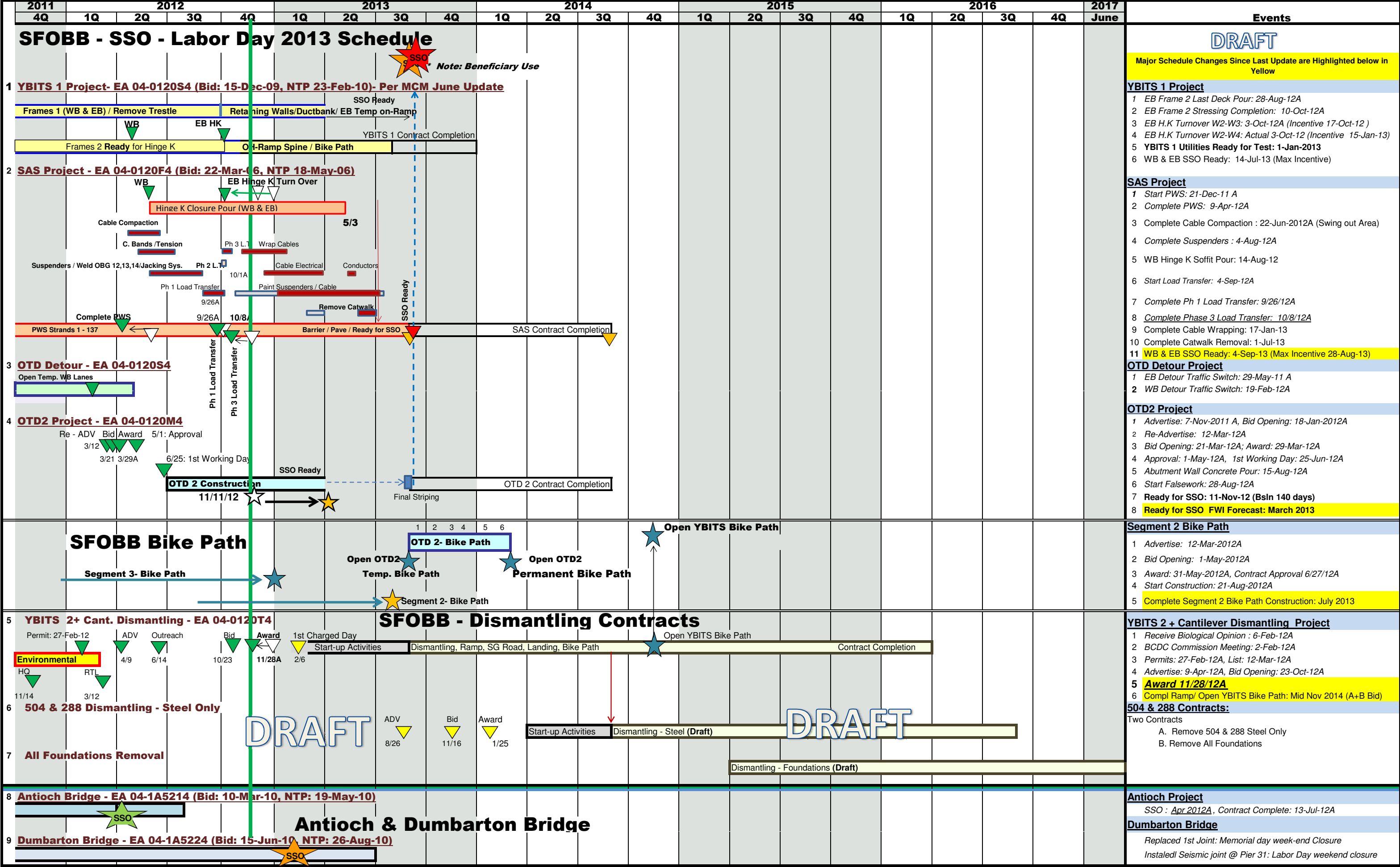
1. SAS Project – Forecast per ABF Oct 2012 Schedule (Ver A)
2. Toll Bridge Seismic Retrofit Program – Summary Schedule (SSO)





Toll Bridge Seismic Retrofit Program - Summary Schedule (SSO)

11/30/2012



## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** December 5, 2012

**FR:** Tony Anziano, Toll Bridge Program Manager, CT

**RE:** Agenda No. - 6a  
Dumbarton Bridge Seismic Retrofit Update  
Item- Completion Event

---

**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

A verbal update on the event(s) being planned for the Dumbarton completion will be provided at the TBPOC December 13 meeting.

**Attachment(s):**

N/A

## **ITEM 7: OTHER BUSINESS**

**No Attachments**